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THE BUSINESS LIFE *of* ANCIENT ATHENS

By GEORGE M. CALHOUN
Introduction by WIGGINTON E. CREED

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FOREWORD

THANKS to the popular accounts of Greek life which have appeared so frequently during recent years, we can now think of the ancient Athenian as a familiar acquaintance, if not a friend. We go with him to the temples of the gods, to the assembly or the courtroom, to the *première* of a new Euripidean tragedy, to a "high-brow" drinking party, to the wrestling school, to the declamation of the reigning sophist. If we will, we may stroll with him in the grove of Academus, wave a friendly hand as he passes in the Panathenaic procession, console him when he has been convicted of stupidity by the sharp tongue and sharper wit of Socrates. There is, however, a part of his life, by no means without interest and importance, to which even this delightful intimacy has not yet procured us admittance. Either he has not taken us to the marts of trade, or, if he has, has whisked us through so hastily that we have caught only fleeting glimpses. We know too little of the busy docks and markets in the Piraeus, of the financial district where capital was mobilized and put to work, or the industrial region round about Laurium, almost modern in its dirtiness and desolation.

This collection of little sketches, hastily written in leisure moments during the past two years, is not in any sense a scientific investigation into the economic and industrial history of Athens. It is merely an attempt to give the general reader who would learn something of this side of ancient Greek life an intelligible account of

the way in which business and finance were carried on in Athens in the fourth century before Christ. Whatever claims to unity and coherence the volume may possess must be based upon the effort to emphasize the personal and ethical aspects of the subject, rather than technical processes or purely economic data. I have endeavored to learn what sort of men controlled trade and finance in these times and places, what were their aims and ideals, their standards of honesty, and their methods of doing business. If the attempt has not utterly failed of its purpose it may prove a modest first step toward a better appreciation of what the Greeks have contributed to the slow building up of the standards and ideals which serve as a background to the commercial activities of the modern world.

The idea of studying these subjects from this point of view was first suggested to me by my friend, Wigginton E. Creed, who has contributed a brief introduction to the volume. My debt to Mr. Creed can scarcely be overstated. At every point in the study I have had the benefit of his suggestions, criticism, and encouragement, and his generous support has alone made possible the completion and publication of the work.

Since the book is intended for the general reader, and not the specialist, I have resolutely excluded footnotes, preferring rather to expose myself to the Scylla-like attack of the stern reviewer than to risk becoming engulfed in a Charybdis of annotation. Consequently it becomes appropriate to acknowledge in general terms my indebtedness to many students of ancient life whose scientific studies I have consulted and found useful. In

two instances, however, the extent of my indebtedness to others seems to make necessary more specific acknowledgment. The account of banking, especially that portion which relates to Hermias, contains much material drawn from Dr. Walter Leaf's suggestive discussion in the *Proceedings of the Classical Association* (England) for 1921, and I have, with Dr. Leaf's kind permission, quoted a number of passages *verbatim*. The chapter on mining, as the specialist will instantly perceive, is based upon M. Ardaillon's admirable monograph, *Les mines du Laurion dans l'antiquité* (Paris, 1897), though here and there I have noted a reservation, and have taken my account of the Pantaenetus case directly from Demosthenes.

Professors Ivan M. Linforth and Stuart Daggett, of the University of California; and Professor A. C. Judson, of Indiana University, have kindly looked over my manuscript and given me the benefit of their friendly criticism. To Mr. T. A. Rickard and Mr. Mark L. Requa I am indebted for a number of extremely helpful suggestions and criticisms having to do with the account of Athenian mining.

It is of course quite impossible to work over material so extensive, on a topic so fascinating, without occasionally getting a new idea. Where hypotheses of this sort seemed to me reasonably credible and worthy of further investigation, I have not hesitated to give them a place in the text, taking care to mark them by some word or phrase which will warn the reader that he is dealing with conclusions which are not fully established or generally accepted. The interpretation of Greek

economic history contained in the first part is based to some extent upon investigations of my own which will, I hope, be available in print before another year has passed. The only marked departure from the usual opinions consists in attributing to the alien population of Attica in the sixth century a very considerable measure of numerical and economic strength.

This study is concerned only incidentally with the general principles which underly the economic life of the Greeks, and makes no attempt to determine the stage of development that life represents. I have treated these aspects of the subject, briefly, in *The Ancient Greeks and the Evolution of Standards in Business* (Weinstock Lectures, Houghton Mifflin, 1926).

BERKELEY
February, 1926

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INTRODUCTION

IN the short period of twenty-five years American business has recast its standards of morality and practice. Autocracy has given way to democracy, and, instead of crashing heedlessly to the old goal of mere acquisition for the swift and strong, business now works thoughtfully toward the new goal of service to society as a whole.

Within this memorable quarter of a century has also come a growth in complexity and comprehensiveness of commercial and industrial machinery which has served to give business a professional aspect undreamed of in the past. Scientist and engineer sit at the council table with banker and executive, and our universities conduct schools of business on a par with those maintained for training recruits for the professions of law and medicine.

It used to be said that the difference between the professions and business was the difference between great learning and no learning at all. Such a distinction can no longer be made, for business now demands, and is generally commanding, in its leaders as much technical knowledge and cultural training as any of the accepted professions. In this progress to professional status business lacks the inspiration of a literature that would take it back to its beginnings and interpret its progress through the ages by a study of outstanding individuals in its ranks. The lawyer, the doctor, the archi-

tect, have such a literature, and it is of vast importance to our day and time that the members of the new profession of business should have one.

The *Business Life of Ancient Athens* is a unique book. It is the first to give to the general reader an account of the individuals who conducted the business of a great civilization of antiquity. They are pictured as living persons, meeting their problems according to their standards, becoming involved with government, suffering from the encroachments of government, contributing to the prosperity and progress of their time, and winning or losing the respect and confidence of their constituency according to their works. In the story of their relationships there is much to develop the professional point of view in the modern business man. There is much to confirm the essential soundness of the ethical movements of the day in business, and to inspire the reader with professional interest and zeal to promote these advances.

In still another respect *Business Life of Ancient Athens* is an unusual book. We are inclined, and like, to look upon social and economic questions of the day as those of a new kind of world. Science has been employed to unlock natural resources, to give a new mastery over nature, to develop new processes, and to create greater comfort and security of life. From this point of view it is indeed a new kind of world; it works under new conditions, it possesses added opportunities. But the world, with all its physical improvement, is still a world of people. This book, in its story of business personalities, brings out the continuity in our social and

economic progress. The business of ancient Athens dealt with the same human nature with which we deal today. Its problems involved as much the play of human spirit as does business today. Its advances were promoted by the nobler instincts of these personalities, and its failures and retrogressions were brought about by their baser instincts. Thus, in finding the same old problems, the same temptations, and the same opportunities for service in the lives of these ancient business men, the author has made available a background of information to create understanding and develop judgment.

Business had to meet in ancient Athens the same test it must meet today. What does it do for the masses of the people? American business under the American system of government has done more to raise the level of living for the people than business has done in any other civilization. In dealing in the future with problems we like to call new, but which in reality are hoary with age, our American business may avoid the pitfalls of old and stimulate its own progress by understanding the methods and standards of those who formed the business world in the civilizations that preceded ours.

WIGGINTON E. CREED

February 10, 1926

PART I

THE COURSE OF ECONOMIC EVOLUTION IN GREECE

CHAPTER I

PRE-HELLENIC AND HOMERIC TIMES

As a result of the remarkable succession of archaeological discoveries made in the course of the last fifty or sixty years we can now follow the history of commerce and industry in the eastern Mediterranean back to a time that antedates by some 1500 years the appearance of the Hellenic peoples in this region. Excavations of ancient sites, particularly in the island of Crete, have revealed the existence of a great pre-Hellenic civilization that had its focus in Crete and for many centuries dominated the Aegean world. This civilization, which is called Minoan, or by some scholars, Aegean, is distinctly visible in its more primitive stages by 3000 B.C. Its great period of power and splendor extends approximately from 2000 to 1500. After this time it appears to have been gradually destroyed by Hellenic invaders and replaced by a distinctly primitive Hellenic culture.

When the Cretan monarchs who dwelt in the great palace of Cnossus were in the heyday of their prosperity, their sovereignty must have extended to the better part of the Aegean world. The written records of the age are still undeciphered, but the testimony of archaeology and of ancient legend alike points to the existence of a potent empire, apparently organized along the general lines of the oriental despotisms that developed in Egypt and Mesopotamia. That is to say, it was a tax-gathering

empire, in which the ruler was surrounded by privileged classes, mostly warriors or religious functionaries, who shared in the wealth wrung from the rank and file of the population. So far as can be discovered, the common people enjoyed no privileges beyond those of a mere existence spent in toiling for their lords and masters.

In certain departments of human activity this pre-Hellenic empire, like those which preceded or accompanied it in Asia and Africa, achieved tremendous progress. Its despotic rulers reared great palaces to serve as royal residences and seats of government. Architecturally these edifices were most remarkable, not merely in size and complexity of plan, but in decoration as well, and in the more practical features that belong in the province of sanitation. In various arts and crafts, especially ceramics, the working of the precious metals, carving of stone, engraving of gems, and mural painting, the Cretans of this age excelled even the folk of Egypt and Mesopotamia.

The Minoan empire, as might be expected from its island seat, which commands the whole eastern end of the Mediterranean, was a maritime power, and its wealth was founded in great measure upon extensive commerce with the various peoples of the Mediterranean basin. Archaeological finds have revealed a commercial intercourse with Egypt that goes back to the earlier Egyptian dynasties. Vases produced by Minoan artists were being imported into Egypt in considerable quantity by 2000 B.C., and seem to have been a regular article of commerce down to the latest Minoan period. In addition to the discovery in Egypt of articles of

manufacture which can be definitely ascribed to Minoan industry, we find upon Egyptian monuments pictures of Cretan envoys and allusions to the Cretan people. Few Minoan sites of importance have failed to yield articles of Egyptian manufacture, and the influence of Egyptian design and technique is easily discernible in the native Aegean wares of various periods. Minoan commerce was not, however, limited to intercourse with Egypt. It seems to have extended to all the islands of the Aegean, to the mainland of Greece, the eastern shore of the Adriatic, and even to southern Italy and Sicily.

At a very early time in their history the Minoans began to use a system of pictographic writing, which they gradually improved and eventually converted into a linear script. Along with this they developed a decimal system of counting that apparently had symbols for numbers as high as 10,000. In some of the excavations have been found great stores of documents. Although the script has not yet been deciphered, the general character and number of these documents bear out the impressions we have gained of the importance and extent of the Minoan commerce; for it has been credibly inferred from pictographic headings that they are chiefly accounts and inventories of various sorts of wealth—stores of corn, flocks and herds, arms, chariots and horses, and similar property. If this inference be correct, we have an interesting testimonial to the financial rating of the kings and members of the ruling class.

Soon after 1500 B.C. this pre-Hellenic culture enters upon a rapid decline, and within a few centuries it seems to have been for the most part destroyed and replaced

by a far more primitive culture of "Aryan" type, introduced by Hellenic invaders from the north. When the Hellenes first appeared in the Balkan region they were a people of pastoral habit organized in petty tribal groups, and had been engaged for centuries perhaps in a leisurely migration toward the favored regions around the Aegean Sea. The process by which they established themselves began apparently as a gradual infiltration, but had as its final result the subversion of the Minoan culture. Toward the end of the second millenium the mode of life described in the Homeric poems appears to have prevailed throughout the shores and islands of the Aegean. The art of writing had been lost, together with most of the craftsmanship and industry of the Minoan peoples. The great palaces of an earlier time had been destroyed, and their places taken by settlements that were little more than villages, the seats of petty Hellenic chieftains and their followers. The political organization of the newcomers was a tribal association of patriarchal type, in some regions extremely rudimentary, in others approaching the simple city-state.

The virtual destruction of Minoan civilization undoubtedly involved the complete cessation of its extensive commerce, and the gap thus caused was filled by the Phoenicians, whose appearance upon the Aegean coasts may be dated somewhere about 1200 B.C. These enterprising merchants, in whose hands the commerce of the Mediterranean was to remain for many centuries, sailed hither and thither, wherever their fancy led them, for the purpose of trading with the Hellenic peoples. This trade was of a very simple and primitive sort, as

will readily be understood if we turn our attention to the economic condition of the Homeric Greeks.

The fall of the Minoan empire and the devastation of its cities were of course accompanied by the destruction or dissipation of the wealth that had been accumulated through long centuries devoted mainly to the arts of peace. Still more disastrous than the actual destruction of wealth, however, had been the abandonment and speedy disappearance of the various arts and industries which had produced it. By the time the Hellenes had fully established themselves as masters of the Aegean, the process of economic retrogression and deterioration must have been well under way, and for several centuries must have gone on with a rapidity that is well-nigh incredible. For the mode of life described in the Homeric poems, when contrasted with that of the pre-Hellenic age, is almost aboriginal in its simplicity and poverty, notwithstanding the glamor of romance with which it is invested by the poet.

The Homeric Greeks instinctively employed the herdsman's measure of value, the worth of an ox, in estimating their possessions, though we find occasional mention of golden "talents," apparently small pieces of gold of recognized weight and purity. Wealth was chiefly in land, the ownership of which appears to have been vested in the family or tribe rather than the individual, in flocks and herds and personal property of various sorts—stores of grain, metals, clothing, arms, and jewelry. Circumstances were not favorable to the accumulation of property, as there was little opportunity to save and put by with safety. War was evi-

dently the chief means of getting and keeping wealth, and the richest and most powerful members of the community were its bravest and most able military leaders. Piracy seems to have been more esteemed than trading as a means of acquiring personal property. On the other hand, while conditions were not well adapted to the building up of great fortunes, there is little indication of extreme poverty; all free members of the community, however humble, had a claim to maintenance from the land cultivated by the family and tribe. It is interesting to observe that wayfarers were entitled to hospitality wherever they might present themselves, and the claims even of beggars were universally allowed. The outlander who might wish to settle in a Homeric community, if he were an able-bodied fighting man, was welcome to a share in the necessities of life, and apparently could hope to find a place by adoption in the family or tribal group. The king, who was the leader of the folk in time of war, its priest and judge in time of peace, was usually distinguished above his chieftains in landed and personal wealth, and possessed, in addition to a substantial allotment of the tribal lands, a special royal demesne.

Although the Homeric Greeks had attained the comparatively advanced agricultural stage in which orchards and vineyards are the common appurtenances to every household of any importance, they had not left far behind the pastoral and nomadic habits acquired in the period of their migrations. It must not be forgotten that their life was simple, their wants few, and the prevailing economy that of the patriarchal household. We find

only slight specialization of pursuits, and little progress toward division of labor. The kings and chieftains worked with their slaves and followers in the fields, and turned their hands, when need arose, to the manufacture of furniture, implements, and arms. The queens span and wove along with the women of their households, and did not disdain to superintend the washing of the family linen, if not actually to participate. Slaves seem to have been comparatively few, and none of the manual arts—unless the grinding of meal can be given so dignified an appellation—was yet looked upon with contempt, as servile or menial in its nature. There are some hints of specialization in these pursuits which most require skill and the dexterity that comes from constant practice. We hear of builders, boatwrights, smiths, and a few other craftsmen; and certain localities were associated with particular products, as Sidon with the weaving and dyeing of fine fabrics. There is no instance in the Homeric poems, however, in which goods are produced by Hellenic craftsmen primarily for sale and profit, though an incidental surplus might be utilized for barter. Skilled craftsmen were respected for their ability and usefulness, rather than looked down upon, a point of view which is not industrial but belongs to the primitive rural community, grateful for the adequate satisfaction of its needs. Possessors of a craft were thought of as desirable members of a community, always welcome wherever they might desire to settle.

Notwithstanding this favorable attitude toward the skilled workman and the manual arts, professional traders and merchants seem to have been regarded with

some contempt by a society in which social position and wealth were largely determined by proficiency in arms. It is true that a certain amount of trading must have been carried on by the Hellenes themselves. The great fleet of ships assembled for the Trojan expedition implies a familiarity with the sea which can only be understood if commerce has attained some considerable proportions. But this is probably in the main the sort of trade described by Hesiod in a still later age, in which the head of the household launches his boat, loads it with his surplus products, and coasts along neighboring shores, trading here and there for the excess commodities of others. In this sort of primitive commerce the kings and the chieftains sometimes engaged, and we may suspect that it was often combined with piracy and cattle-lifting. There are, however, certain facts that cannot be explained merely by the assumption of such primitive and restricted commercial intercourse. Homer repeatedly mentions gold, silver, ivory, and other commodities which apparently came from remote places. For example, amber found in the exploration of various Aegean sites has been shown by chemical analysis to have come originally from the Baltic regions. The possession by the Homeric Greeks of such products of distant lands would seem to indicate that they were visited by professional traders, who distributed commodities throughout a vastly greater area than that affected by the primitive Hellenic civilization. Trading as a profession, however, is seldom mentioned by Homer, and then only with some contempt. A Homeric chieftain is gravely insulted when mistaken for "a commander of

sailors and traders, watchful of his gains and greedy profits." Still lower in the social and economic scale comes the itinerant trader who has no ship of his own, but only his stock of goods, who trades here and there as fortune leads him, making his way from place to place in various ships on which he can secure passage for himself and his wares. Since the Phoenicians were probably the only professional merchants and traders to be found in these times and places, it may be pertinent to inquire whether their practices or ethical standards justified this attitude of scorn and dislike.

The Phoenicians are seldom mentioned in the Homeric poems, but from two instances we learn that they practiced along with their legitimate trading the nefarious occupation of kidnapping, and we get a distinct impression that they hesitated at no treachery or deceit from which they might hope to profit. This absence of proper standards, perhaps of common honesty, is probably to be accounted for, not alone by the much-abused Phoenician character, but also by the fact that individual traders followed no regular routes and established no permanent connections to be maintained and improved by honesty and fair dealing. They seem to have voyaged at random, bartering their wares for products in whatever regions they chanced to visit. There was nothing in such commerce to make for the establishment of fixed principles or business standards. Furthermore, since the Greeks in these times produced little if anything of sufficient value to be exchanged for the goods of the Orient, it is likely that the Phoenicians traded principally for slaves, captives taken in the incessant

intertribal wars and raids; and slave trade does not usually tend to the upbuilding of a high moral code. This would perhaps account for the evil reputation of the Phoenicians as kidnappers. The importance of Phoenician commerce, although it does not appear from the few allusions in Homer, is amply attested by the presence in the Greek language of words which are probably of Phoenician origin. The Phoenicians continued for many centuries to be the chief traders and carriers of the Mediterranean, and apparently in all this time failed to improve upon their rather dubious reputation for honesty.

Since these are the beginnings of commerce in the Hellenic world it is not difficult to see why it was long looked upon by the Greeks as an occupation unworthy of a freeman and a gentleman. We have now to study the process by which it was developed from these slight beginnings into an economic basis for advanced and powerful civilizations, and how it was lifted from this low moral plane to a position of considerable esteem, in which it offered a worthy field for the energies of influential and respected members of society. To do this we shall have to follow the various steps by which agriculture becomes definitely the principal occupation of the Greeks, and in turn is supplemented by trade and industry. Although the evidence is scattered, an attentive study may give us some idea of how the Hellenes developed and modified in the course of centuries the practices and standards they received from their oriental neighbors.

CHAPTER II

INDUSTRY AND FINANCE UNDER THE ARISTOCRACY

UNDER the aristocratic governments which very generally replaced the primitive monarchy early in the first millennium before Christ, the economic changes of greatest importance had to do with land tenure. In the Homeric period, as we have seen, individual ownership was apparently limited to personal property, while real property, with the possible exception of royal demesnes, belonged to the patriarchal family or was even thought of as pertaining to the tribe. At some time that cannot be precisely ascertained, but prior to the eighth century, individual ownership of land became the prevailing system. One of the results was the breaking up of many family holdings into small farms, each of which would suffice for the maintenance of a peasant proprietor who was the head of a family in the sense we attach to the word today—wife, children, and other immediate dependents.

This breaking up of large holdings was not, however, a universal process. Certain individuals and their families established themselves as a sort of hereditary nobility, and remained in possession of large landed estates, usually situated in the more fertile portions of the countryside and worked by tenants, serfs, or, in some cases, slaves. In the Dorian states serfage was the usual relation between this landed aristocracy and the workers

on their estates. Examples are the helots of Sparta and the serfs of the Cretan states. In Ionian communities we find no clear traces of serfage, and the larger estates are worked by a class of poor laborers who appear in some instances to work on shares; in others, for wages.

In the earlier period of the aristocracy there seems to have been little or nothing that could be dignified by the appellation of finance. Coined money was not yet in use, and trade was still limited to the barter of commodities in kind. Apparently the only commerce worthy of the name was still in the hands of the Phoenicians. There is no evidence that this had changed its character or materially increased its volume since the Homeric age. The community undertakings which constitute the necessity for public finance were still limited in size and intermittent in character, and the burdens to which they gave rise were met by families or by powerful individuals. The best examples are undoubtedly the operations of war and the conduct of religious ceremonies. In neither instance was there, in these primitive times, expense to be defrayed from a common fund; individuals, families, and neighborhood groups mustered for war, carrying their own arms, equipment, and provisions, or assembled for sacrifice and festivity bringing their contributions of victims and of wine. Warlike operations were not yet organized by the central authority in the state and the cost assessed upon the body politic. The temples of the gods had not assumed the character of perpetual religious foundations with permanent funds. And a long period of time was to pass before public utilities, such as the water supply, or the construction and

maintenance of roads and streets and public places, came to be systematically administered by the government.

It is clear that the economy of a people in this stage of social and political development was still the economy of the family or the neighborhood group. There had, perhaps, been some progress toward specialization and division of labor, but the family still produced for itself most of the commodities it consumed. The annual yield of field, orchard, and vineyard was gathered and stored for use throughout the year. Animals were butchered as they were needed for consumption. The skins were prepared for use by simple home processes; the wool produced on the farm was cleansed, carded, spun, and woven into garments for the family by the women of the household. The head of the family did his own carpentry and metal work with the help of his sons and servants, and there were probably few instances in which a household could show tools or appliances of any description not of home manufacture.

Such trade as the Greeks themselves carried on with the people of neighboring communities was of the simple and sporadic character observed in Homeric times. Our best notion of this primitive interchange of commodities, as of every other element in the existence of the peasant farmer, we get from the *Works and Days* of Hesiod. The poet has prepared a calendar of the year's activities, setting forth the proper times and methods of sowing and reaping, of the vintage, and all the other operations of the rural household. Among other scenes we see the farmer, when he has stored the annual yield of his little

farm and checked it against the probable requirements of his household, loading his surplus commodities into his own boat, probably built with his own hands, and coasting along adjacent shores, bartering his goods for the excess products of his neighbors.

It would be idle to seek for the ethical standards of business where "business" does not exist. The factor which contributes most strongly to the gradual formation of such standards, permanent business relationships, had not yet made its appearance. Mutual distrust seems to have been the only security in transactions involving wealth or property of any kind, and Hesiod formulates the golden rule of his day to somewhat the following effect: "In any and every transaction, though it be with your own brother, call witnesses—but do it with a pleasant smile." However, a little ray of light upon these matters comes from a passage in which the poet describes the praiseworthy rivalry that obtained among the members of the different crafts. It indicates that specialization was reaching the point where craftsmen would soon need to formulate some basic principles to guide them in their relationships with one another and with their customers.

One is tempted to feel that here, in the early age of Greece, we can find at least a partial explanation of certain practices and standards which have evoked criticism of business in every age and place and are only now very gradually falling into disuse. In the Homeric age, as we have seen, the most effective and honorable method of acquiring wealth was warfare and its kindred pursuit, piracy. Consequently, even after men began to

substitute less violent modes of exchange, they still instinctively regarded the individuals with whom they had to do as natural foemen, whom it was their interest to outwit in any possible manner. Obviously, before this conception of the mutual relation between buyer and seller can be replaced by others better suited to the pursuits of peace, commerce and industry must be on a somewhat secure footing and must involve relationships of a lasting character.

In the centuries following the age of Hesiod there were two important changes in Hellas which effected a tremendous revolution in the social, political, and economic condition of the great bulk of the population. These were the introduction of coined money and the development of manufacturing and industrial pursuits to the point where in many cities they superseded agriculture as the economic foundation of society. We can best trace the gradual effects of these changes in Attica, the only state from which we have sources of information worthy of the name.

In the age of Hesiod, Attica, like the majority of the Greek states, seems to have been populated mainly by peasant farmers of the type just described. Scattered here and there among their little farms, however, and so disposed as to occupy much of the most fertile land, were larger estates. These belonged to powerful and prominent families who had begun to develop into a hereditary nobility, distinguished from the peasant population in descent, wealth, and social prestige. Now the small holding of the peasant farmer, although it might yield sufficient for the owner and the members of his

household in a normal year, would not do so in a season when there was a failure of crops—a thing not infrequent in Attica. When the store of provisions ran low the peasant had no recourse save to borrow from his wealthier neighbor, whose broad and fertile acres yielded a surplus to be stored against times of scarcity. Before the introduction of coined money the peasant farmer borrowed commodities and repaid the loan in kind, and unless there were several successive seasons in which the crops failed, he was probably able to meet the obligation without great difficulty; but after the introduction of coined money the situation became decidedly more difficult. The large landowner naturally found it to his advantage to sell his surplus products and store his wealth in the more convenient form of money. Consequently the peasant farmer who sought a loan in years of famine could no longer borrow commodities to be repaid in kind; he must take a loan of money, and with it must purchase his necessary supplies at a time when money was cheap, and commodities dear. When a year of plenty came and he undertook to repay the loan, commodities were cheap and money dear. As a result he found himself in the position so often occupied by the man with little capital, forced continually to buy at the top of the market and sell at the bottom. The outcome is easily foreseen. A time came when the peasant was unable to meet his obligations to his wealthy neighbor; the land he had pledged for his loan was added to the estate of the creditor, and he and the members of his family from freeholders became tenants. These tenants seem to have lived in a wretched plight, toiling for a

mere pittance of what the land produced, for we are told they had to give over to the lord of the manor five-sixths of all their crop. If the pitiful share left them proved insufficient to sustain life, and they defaulted in the payments of produce to their lord, they were reduced, men, women, and children alike, to the still more deplorable condition of chattel slaves, who might be sold into foreign lands, or in any other way treated as mere property and not as human beings.

Even had the economic situation not been complicated by other factors than the poverty of Attic soil and fluctuation in the purchasing power of money, there would have been a steady tendency toward the degradation of the small freeholding class to the condition of tenants and even slaves. But other factors accelerated the process and eventually brought about an economic crisis of a serious nature. During these times, it will be remembered, industry and manufacture were assuming important proportions in many of the Greek cities. Athens, by reason of her mineral wealth and an advantageous location for commerce, very early became an important center of manufacture and trade. Deposits of excellent potter's clay resulted in the building up of an extensive ceramic industry; and Attic pottery was soon in great demand throughout the entire Mediterranean area. This industry attracted settlers from other parts of Greece, and it is probable that Athens, in the times of which we have just been speaking, had already a rather important industrial population, mainly alien and partly servile. Since the soil of Attica was not sufficiently fertile to support a large population, the inevitable result

was importation of foodstuffs, to be paid for with the profits of manufactures and trade. The peasant population had not yet engaged in these pursuits, and, as long as they relied upon agriculture for a livelihood, their distress must have been greatly increased by the fact that in years of scarcity they had to buy food in a market in which prices were determined by the needs and purchasing ability of a prosperous industrial community. It was still further accentuated by the burdens of a long and indecisive war with Megara, and, toward the close of the seventh century, had led to an economic and social condition which, if not speedily amended, must end in revolution. Solon, the dominant figure of this time, tells us that the desirable agricultural land of Attica had come into the control of a wealthy landed aristocracy which constituted a small minority of the population and controlled absolutely the political fortunes of the state. The peasant farmers and native craftsmen who had once constituted the bulk of the population had been converted for the most part into a discontented proletariat, constantly subjected to the political oppression and economic exploitation of the aristocracy.

Thus the end of the sixth century saw the agricultural activities of Attica, which had once been the economic dependence of the middle classes, completely in the hands of a wealthy minority. Manufacture and trade had attained considerable importance, but apparently were, for the most part, carried on by aliens who came from other states, attracted by the mineral wealth of Attica and her advantageous location for trade. From this time on for nearly a century the history of Attica is

the history of a three-cornered struggle between the landed aristocracy, the poor and oppressed laboring population of native birth, and a prosperous industrial element, mainly alien, who were still debarred from the participation in government to which their economic status would seem to entitle them. Somewhat similar situations had arisen in other states in which manufacture and trade had assumed important proportions. The processes by which the difficult problems involved were gradually brought to solution belong to the story of the industrial revolution.

It is evident that by the end of the seventh century the ingenuous attitude of the Homeric Greeks toward labor was a thing of the past. The production of household necessities, no longer a fitting occupation for the head of a wealthy household, was intrusted to hired laborers or slaves. The manual arts, for the most part, had come to be thought of as unbecoming to freemen and citizens, if not actually servile. There is no evidence that the professional merchant stood any higher in the general esteem than in the days of Homer, and if we credit the tradition that Solon, who came of a powerful and distinguished family, devoted many years of his life to mercantile pursuits, we must regard the case as an exception rather than as representing a general rule. Agriculture was the only gainful occupation in which the free citizen was ordinarily willing to engage, and no doubt his participation was somewhat like that of an English country gentleman today.

From an allusion made by Solon to the embezzlement of public and sacred moneys we learn that state

finance had made its appearance, perhaps in a very rudimentary form, and some, at least, of the temples had acquired treasures. The existence of state funds at this time is further attested by the division of Attica into districts for the apportionment of public expense and by the classification of the citizens according to wealth. These innovations evidently resulted from the gradual breaking up of the old kinship groups and the centralization of public enterprises in the government, which made necessary a systematic classification of the population for fiscal purposes. As to the way in which the funds were employed, we have no information, but may perhaps credibly infer that state funds were used to defray the expenses of war, and temple treasuries were drawn upon for the conduct of religious ceremonies. Whether any state moneys were expended upon the purposes for which they would be used today—for example, the construction and maintenance of streets, aqueducts, and public buildings—we cannot say. It is only half a century later that the actual conduct of such public activities begins to leave a record.

CHAPTER III

THE INDUSTRIAL REVOLUTION AND THE TYRANTS

THE aristocracies had developed in agricultural communities in which peasant farmers made up the greater part of the population, and they functioned fairly well as long as this condition continued. They were not capable, however, of solving the difficult problems created by the degradation of the peasant farmer to the ranks of the proletariat, or by the appearance of a prosperous industrial population composed mainly of aliens. In states in which these problems became acute the aristocracy was destined to be overthrown. Since at this time the only known types of political organization were the primitive monarchy and the aristocracy which was now breaking down, men sought vainly in their past experience for a system of government capable of attacking and solving these new difficulties. The inevitable result, in cities where the strife of classes was most intense, was the installation of some popular leader or demagogue as sole ruler. Such a ruler the Greeks called a "tyrant," using the word, not as we do, to connote a harsh and unjust authority, but merely to distinguish monarchs who seized the throne by force from those who received it by descent or election. As the economic forces behind the revolution were functioning simultaneously in many states, the change from aristocracy to tyranny was so frequent during the

seventh and sixth centuries that this period is called the Age of the Tyrants. It constituted an interregnum between the ancient modes of government developed naturally from kinship groups and newer forms gradually devised in the effort to solve political and economic problems.

The processes by which these tyrannies arose cannot be better illustrated than from the history of Attica. At the end of the seventh century, as we have seen, economic conditions threatened revolution. Solon was invested with dictatorial powers and intrusted with the revision of the Athenian "constitution," in the hope that he might be able to effect a compromise between the wealthy rulers of the state and opposing factions. His reforms were drastic enough, from our modern point of view, to meet the most acute situation. He abolished all debts upon the security of land or persons and restored to freedom and to citizenship those Athenians whom poverty had degraded from their former status. He prohibited for all future time the seizure of the person for debt. In addition to this he devised a more democratic system of government, provided for popular courts, and introduced criminal actions, in order that the rights of the individual might be more adequately protected by the state. Unfortunately for the success of his plans, he did not confer upon the lower classes of citizens sufficient economic strength to assure them in actual fact the privileges provided in his legislation. Nor did he, apparently, grant political privileges to the alien industrial population. His reforms, like other attempts at compromise, were unacceptable to conservative and radical

alike. The members of the aristocracy had thought he would make no great changes; the proletariat had hoped for a confiscation of large estates and a redistribution of land. Although his laws were accepted in part, his reforms did not avail to avert the impending revolution. After thirty years of factional strife and intermittent periods of anarchy, Pisistratus, a brilliant politician and demagogue, contrived to organize the discontented elements and make himself supreme ruler of Attica. He was twice driven out by temporary combinations of aristocratic factions, but each time was able to re-establish himself upon the throne.

When we speak of the "tyranny" of Pisistratus we must keep in mind the connotation of the word in Greek, and must not expect necessarily to find him a "tyrant" in the modern sense. As a matter of fact his general policies, both economic and political, were prudent and sound and fairly liberal. By dividing up the estates confiscated from political opponents, he converted a large proportion of the proletariat into peasant farmers; he substituted for the oppressive burdens under which the poorer classes had groaned as tenants the reasonable tax of 10 per cent upon all products of the soil, and this he appears later to have reduced to 5 per cent. He developed and extended Athenian commerce until it became a profitable source of wealth to Attica. Appreciating the vital importance of the Dardanelles to any commercial power in the eastern Mediterranean, he planted Athenian colonies on its shores. Furthermore, he negotiated with other Greek states treaties providing for amicable trade relations. It is not surprising that as a result of

his policies the wealth and prosperity of Athens increased greatly during his reign. The portion of this wealth that came into his hands as ruler of the state he used wisely, devoting a good part of it to the construction of public buildings, roads, and the first aqueduct commensurate with the city's needs. He encouraged and patronized arts and letters, and under his administration Athens began for the first time to take a prominent part in the spiritual, as well as the material, activities of the Hellenic world. In general, the era of the Pisistratids was characterized by prosperity and progress in every department of human activity.

Among the numerous stories by which historians have sought to illustrate the habits and temperament of Pisistratus is one which shows his interest in the rural population of Attica. While making a journey incognito through some of the outlying districts he came to a little patch of ground, located on a steep and rocky hillside, where a poor farmer was turning up the thin soil with great difficulty. Pisistratus courteously asked the man what he could possibly raise on such a plot of ground. "Nothing but aches and pains," the man replied, "and of these Pisistratus must have his tithe." The monarch was so amused by the ingenuous and apt reply that he issued a special ordinance exempting this particular farm from taxation.

The industrial and commercial development we have described in Attica was equaled or exceeded in many other Greek states. The Ionian cities very early became famous for their textile products; the fabrics of Miletus were especially in demand; and the manufacturers of

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Miletus found in those of Mitylene formidable rivals. On the island of Aegina a very considerable manufacture of bronzes was gradually developed, and the Aeginetans took a prominent part in the commerce of the Aegean in this early period. Chalcis in Euboea was famous for its bronzes and fine dyes; Sicyon, for bronzes and ceramic wares; and Megara became an important center of manufacture devoted principally to the production of homely and useful wares. It was Corinth, however, that stood first in the industrial development of this period. Situated on an isthmus, with a harbor on either side, she possessed advantages as a trading center unequaled by those of any other city. Greek mariners were still reluctant to confront the dangerous voyage around the Peloponnese, and, when they had cargoes to transport from east to west or vice versa, they preferred to sail into one of Corinth's two harbors and trans-ship across the isthmus. So common did this practice become, and so enormous were the amounts of merchandise brought to the harbors of Corinth for portage, that a tramway was constructed across the isthmus by means of which ships were carried across without unloading. Under these circumstances we need not wonder that Corinth soon took a leading place not only in commerce, but also in manufacturing, and was famous for her vases, bronzes, fine textiles, and other wares.

This period of industry and commercial development was also a period of colonial expansion, and it is interesting to observe that in general the states which took the lead in manufacturing and trade were foremost in planting colonies along the shores and on the islands

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of the Mediterranean. These colonies served as distributing points for their wares and collecting centers for the foodstuffs which had to be imported in order to feed the industrial population. It would appear that the extensive diffusion of Hellenic culture in this period throughout the Mediterranean world was in large part the result of the commercial development that has been traced.

Another concomitant of industrial expansion, as we have seen, was the overthrow of aristocratic governments and the establishment of tyrannies in most of the cities in which, as in Attica, agriculture gave way to industry and trade as the economic basis of life. The famous tyranny of the Cypselids in Corinth was established about 657 B.C. and endured until about 586. Another famous tyranny, which was set up in Sicyon, is especially interesting for the reason that a clear record has been left of bitter antagonism toward the landed aristocracy and a union of interest between the ruler and the manufacturing and trading classes. No catalogue of the tyrants who contributed to the brilliance of this age would be complete without mentioning Polycrates of Samos. Although Polycrates is associated chiefly in the popular mind with the famous story of his unsuccessful attempt to lose a ring, it is more important for the present inquiry to remember that it was in all probability he who executed the famous tunnel by which water was carried a distance of nearly 1,500 yards through the heart of a mountain to supply the city of Samos. The construction of the tunnel, of which remains are still to be seen, is justly regarded as one of the

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great engineering feats of this early age; excavation was started from both sides of the mountain, and the engineers were so accurate in their calculations that the tunnels were successfully brought together in the center.

In general, the Greek tyrants seem to have been, like Pisistratus, men of statesman-like ability and breadth of vision. Their courts were almost invariably centers of art and literature and science, and some of the most beautiful and useful public works of ancient Greece resulted from their wise administration of the public wealth. Under their sway the Greek cities made great strides, both in material wealth and in the political development of the citizens.

To the student of political phenomena the Age of the Tyrants presents one of the earliest instances of a process still to be observed in our own times. When the masses of the people, being without political privilege, become too strong and too discontented to be longer held in subjection, but are still too ignorant and too little versed in the responsibilities of citizenship to exercise the power they are to wrest from their rulers, they almost invariably become subjected to ambitious and capable demagogues, who find means to promote themselves from the position of popular leaders to that of autocratic rulers. It is only after a considerable interregnum of tyranny, during which the body politic is gradually fitted for the exercise of active citizenship, that such a monarchic government gives way to a more democratic constitution. This sequence is to be discerned in the events that followed the French revolution, and is perhaps going on in Russia today. We may possi-

bly infer from these and other incidents that the salvation and improvement of democratic forms of government are to be sought, not in revolutionary legislation, but rather in a more general and more liberal education of the masses who constitute the majority of the electorate.

Unfortunately we know this remarkable period only in its larger outlines. We have no information as to the individuals who were engaged in trade and commerce in the age of the tyrants, or their methods, ideals, and standards of service. We can, it is true, infer from the increasing importance of industrial and commercial activities in the Greek state and the greater esteem in which these pursuits were held in later times that the men who devoted themselves to the manufacture and transportation of commodities had improved their standards and ideals as well as the technique of their trades. There is one slight hint that points in this general direction. Many of the vases from the Attic potteries are inscribed with the names of the makers, or the artists who decorated them, or sometimes both. This seems to show that the members of the potters' craft, who had become sufficiently numerous and powerful to give the name of their trade to an important section of Athens, took a praiseworthy pride in the excellence of their products. These vases are practically the only manufactured articles of this remote period that have survived the ravages of time. Had we products from factories of other sorts, we might find that the same custom prevailed, and that the modern manufacturer's pride in the excellence of the

service he renders and the quality of the goods he puts out is nothing new.

Nevertheless, whatever may have been the detailed history of commerce and industry during the age of the tyrants, we know that these pursuits and the men engaged in them occupied a much higher position in society and in the state at its end than at its beginning. The merchant and the manufacturer were looked upon with greater esteem, and success in business became one of the avenues to citizenship and to political influence. This was not the case, of course, in such conservative regions as Thessaly, where agriculture continued to be the economic foundation of the state, or Lacedaemon, where legislation was resorted to in order to retard the march of industrial development; but it was true of all the states which had developed industrial and commercial operations to any great extent. Again we may best trace the course of events in Athens, the only city for which we have sufficient information to reconstruct the history of this period.

CHAPTER IV

THE FIFTH AND FOURTH CENTURIES

AFTER the final expulsion of the Pisistratids, in 509 B.C., Clisthenes reorganized the Athenian government and laid the foundations of democracy. He did away with the old restriction of citizenship to the original agricultural population of Attica, and admitted into the body politic the alien manufacturing and trading folk who had established themselves along the coast. Thus the industrial population, so long denied the franchise, were now given the rights to which they were entitled. Attica ceased to be an agricultural community with aristocratic government, and definitely took her place among the commercial powers of Hellas.

It is impossible here to do more than touch upon the chief events in her economic development. At first merely one of several rivals contending for the mastery of the Aegean, she soon adopted a naval and commercial policy which culminated in tremendous expansion and put her far ahead of her most powerful competitors. According to tradition, this was made possible by the opening of the silver mines at Laurium, and the revenue from this source was at first employed in the construction of the fleet by means of which Athens was able to take the lead in the war with Persia. Whether or not this be literally true, the Athenians built up a powerful and prosperous maritime empire during the fifty years that followed the Persian Wars. In these times the silver

mines appear to have been worked continuously and to have brought in a handsome revenue to the state as well as to the individuals to whom mineral property was leased.

Although the age of Pericles is generally associated in our minds with artistic and spiritual progress, it would seem that Pericles was well aware of the need for commercial development. He not only assembled in Athens artists, philosophers, and men of letters, but also invited manufacturers and financiers to become residents of the city. A familiar instance is Cephalus, father of the orator, Lysias, who came to Athens at the suggestion of Pericles. He apparently founded the shield factory later conducted by his sons, and for many years was one of the most prominent and esteemed members of the community, although he never became a citizen. We hear of other wealthy aliens who brought their enterprises to Athens about this time, and cannot doubt that the presence of a large and prosperous alien population toward the end of the fifth century resulted from a friendly and liberal attitude toward foreign capital.

At the close of the century the defeat of Athens in the Peloponnesian War shattered her economic strength as well as her political power. Agriculture suffered more than trade or manufacture, and was apparently not so well able to recover from the devastating effects of the war. As the state gradually recovered its prosperity, it became more than ever dependent upon manufacture and trade. And with the beginning of the fourth century we find little trace of the old aristocratic predilection for agriculture and contempt for trade. It is true that retail

trade on a small scale was still looked upon as unbecoming a citizen and was mostly in the hands of aliens, but no stigma attached to business in general, and the men who take a prominent part in the political and social life of the state in the fourth century are for the most part business men. In the pages of the orators we are introduced not only to country gentlemen, but also to bankers, capitalists, merchants, and manufacturers. These are the men whose income taxes supported the state in the face of great demands, maintained its fleets in time of war, and defrayed the expenses of its public festivals and dramatic entertainments. It is perhaps significant that in this period the political head of the state was no longer the general, chosen from an old aristocratic house, but the state treasurer. The business man and financier had come into his own. And the great orator, Demosthenes, feels no need of apology when he tells how his father gained wealth from a furniture factory and a cutlery business. The times had passed when a comic poet could effectively attack the political head of the state merely on the ground that he had made his money as a tanner.

In developing in so short a time from a village, the center of an easy-going agricultural community, into an industrial metropolis, Athens had not had time to devise the machinery and methods by which our great modern centers of population are able to command capital sufficient to deal with the vast and complex problems of city life. The joint stock company, for example, had not yet been adapted to commercial enterprises, which were still carried on mainly by individual capitalists or by partnerships. To make up for this deficiency and organize capital on a sufficiently large scale to supply the city

with the commodities required by its population it became necessary to encourage the capitalist by every legitimate means. And it is probably for this reason that we find the financier and the successful man of business occupying so important a position in the life of the times. Even for the man who started at the very bottom of the ladder, efficiency and success in business often led eventually to citizenship and social prominence. In fact, several financiers who came to Athens as slaves rose to positions of great eminence as the result of their success in business. A further encouragement to the free and ready employment of capital in filling the various needs of metropolitan life was the establishment of special courts in which the capitalist who was a victim of fraud or injustice could enforce his proper rights by a special form of action, and thus have assurance of getting justice promptly.

Although the commercial and financial operations which had attained such vast proportions in the life of the city represented a great diversity of pursuits and interests, several branches of business were of especial importance. Some of these fortunately have left a fairly full record in the writings of the time. In the pages of the orators we can trace the fortunes of a famous banking house, follow the course of litigation over a mining enterprise, or get some idea of the various types of men who were associated in one way or another with the traffic in grain. We may turn to a study of these various pursuits with a fair chance of finding out something interesting about the individuals engaged, their methods of carrying on business, their standards of conduct and responsibility, and their professional ideals.

PART II

THE ATHENIAN GRAIN TRADE

CHAPTER I

INTRODUCTION

ANCIENT Greece was for the most part not well suited to agriculture. The fertile tracts capable of producing satisfactory crops of cereals were small and scattered. Attica, in particular, was notorious for the poverty of her soil and, except in very early times, probably never produced sufficient grain to support her population. There are distinct indications that Athens was in some measure dependent on imported cereals as early as the sixth century. Under Pisistratus she attempted to secure a foothold on the shores of the Dardanelles, which, in ancient times as now, were the gateway to the great grain-producing areas about the Black Sea. There is also the tradition that Solon, approximately half a century earlier, had found it necessary to put an embargo upon the exportation from Attica of certain foodstuffs, notably grain. Be that as it may, in the fifth and fourth centuries the soil of Attica was certainly incapable of providing food for the population. As a result of the commercial and industrial expansion traced in the preceding chapter, Athens had increased at a rapid rate both in population and in wealth. On the other hand, circumstances had not been favorable to a comparable agricultural development of her territory. In the fifth century, with a treasury amply supplied by the contributions of her allies, she had employed a great many of her poorer citizens on various and sundry pub-

lic tasks. Increasing numbers of the peasant farmers found it more enjoyable to live in the city and support themselves on the stipends derived from state service than to cling to their abodes in the country and endeavor to gain a living from farming the sterile soil. This tendency toward concentration of the population in the city and neglect of agriculture was sharply accentuated by the Peloponnesian War. Year after year Spartan armies invaded Attica during the summer and destroyed utterly, not only the annual crops of wheat and barley, but the olive groves, the orchards, and the vineyards. It is small wonder that after the war the peasants, when they had once discovered the diversions and conveniences of city life, were in many cases disinclined to return to the country and try to reclaim their ruined farms. In the time of Demosthenes, after more than a century of increasing consumption and diminishing production, Athens was in large measure dependent upon foreign sources of supply, and was importing annually enormous quantities of foodstuffs, which were paid for with the profits of her manufactures and trade.

Attempts have often been made to estimate the mean annual importation in this period, by determining the total population, the probable consumption per individual, and the domestic production. So great is the possibility of error, however, to say nothing of the glaring divergencies in the estimates actually reached by this method, that we can put little confidence in the figures proposed by various investigators. It is quite sufficient for our present purpose to keep in mind the general situation, which is fortunately well attested by reliable con-

temporary evidence. The population of Attica was far in excess of the number that could be fed on the yield of her soil, and the annual importation of grain probably averaged well over a million bushels.

In order to realize how serious this problem appeared to the ancient Athenians we have but to recall the somewhat analogous situation in which Great Britain was placed during the recent war. Like Great Britain, Athens had known, during the later years of the Peloponnesian War, what it meant to be entirely dependent upon importations and constantly faced by the possibility of having them cut off by a naval defeat. In the case of Athens this actually occurred, and the city was finally forced by starvation to surrender to the Peloponnesians after courageously enduring several months of famine. In view of these conditions, and after such experiences, we can easily understand that the grain trade was a matter of vital importance to every Athenian, and the state endeavored to promote and encourage it by every possible means. The average citizen lived almost exclusively upon cereals, to which he added, as a relish, occasionally a bit of meat or fish, but oftener a little garlic, cress, or some other common vegetable. Next to air and water, grain was the most indispensable requisite of existence, and the grain trade came nearest, in importance and general functions, to the part played in our modern city life by the great public utilities companies.

As was noted in an earlier chapter, the Athenians had not developed financial methods entirely adequate to the satisfactory performance of such services upon the scale demanded by the city's population. The joint

stock company, by which capital can be easily mobilized in almost unlimited amounts for big undertakings, was employed in farming the taxes, but had apparently not been carried over into the general world of business, and we find no instance from this period of a joint stock company with large capital carrying on trade on a great scale.

In fact, the manner in which Athenian trade proceeded is strikingly unlike the methods of the modern world. With us the greater part of commerce between nations, and even between neighboring localities, is carried on by large corporations with offices and correspondents at many different points, having at their disposal the financial resources and facilities offered by our modern banking system. Many of them employ whole fleets of ships, in addition to using the ordinary avenues of rail and water transportation. The ancient trade in grain, as in other commodities, seems to have been carried on for the most part by men with little or no capital of their own. The merchant would purchase a cargo with money borrowed, at what we should regard as an exorbitant interest, for one particular venture. To transport this cargo he contracted with a shipowner for all or a portion of his cargo space, and in many instances sailed on the ship in person. Arrived at the destination, he sold the goods and either repaid the loan to an agent of the lender or, if the venture was on the round trip, purchased a return cargo. He counted on making a good profit on a single venture, to which he devoted his whole time and energy until it was completed, rather than on conducting a number of enterprises simultaneously with

an expectation of smaller profits from each. Thus three types of persons united to carry on the import trade in grain and other commodities necessary to supply the needs of a great urban population. There was first the capitalist, lending his money in comparatively small amounts at a high rate of interest for particular shipping ventures. Next came the merchant adventurer, who contributed only his time and energy and utilized the capital of others. Lastly there was the shipowner, who hired his vessel first to one person or firm and then to another, apparently making a separate contract for each voyage.

The type of contract under which these operations were conducted is now called respondentia. We have, fortunately, the complete text of one of these agreements as read to the court by a litigant. To judge from other cases, it may be regarded as typical. It is a joint and several contract, sealed by the parties, setting forth the amount of the loan, the general route to be followed on the voyage, and the rate of interest, which is to be 22½ per cent, but may be increased to 30 per cent if certain deviations from the route, involving added risk, be made by the borrowers. The nature and amount of the cargo to be bought with the loan are specified. The borrowers affirm that there is no prior lien upon the cargo, and agree not to contract any further indebtedness upon the security. The contract further provides for the termination of the borrowers' obligation in the event the vessel be lost, and for proper abatement in case of jettison or enforced payment to enemies. The borrowers agree to purchase a return cargo and, upon arrival in Athens, to deliver it as security to the lenders;

it is to be under their absolute control until the sum due under the agreement is paid. If this be not paid within the stipulated time the lenders shall have the right to sell or pledge the security, and, if there be any deficiency, to levy the amount by execution against all other property of the borrowers, whether on land or sea, wheresoever they may be, in the same manner as if a judgment of court had been entered against them and they had committed a default in payment. Nothing is to have greater effect than the contract. This instrument was signed and sealed in the presence of witnesses and deposited with a third party, copies being taken by the contracting parties.

In order to safeguard the interests of the lender, and thus encourage the employment of capital in the grain trade, the Athenians provided special courts and special forms of action in suits arising from transactions in which contracts of this description had actually been executed. These courts sat during the winter months, when shipping was interrupted by stormy weather, to the end that trials might not interfere with commercial activities. The court was required to give judgment within thirty days of filing of the action. Furthermore, a judgment debtor could be held to bail or, if an alien, imprisoned, until the judgment was paid. This exceptional procedure applied only to cases in which a contract had actually been entered into in writing for conveying a cargo to or from Athens. It was a part of the general attempt of which we have spoken to promote by every legitimate means this commerce so vital to the existence of the city.

The respondentia contract is used in modern times only seldom, and generally to meet exceptional exigencies. It has one great defect which would alone condemn it: the lender, from the time he has parted with his money until it is repaid, or a return cargo representing its value turned over to him or to his agent, has practically no security beyond the integrity of the absent borrower, unless perchance the latter owns property upon which it will be possible for him to distrain. The mere fact that a trade so great in volume and of such tremendous importance to the welfare of Athens was carried on year after year under a type of contract which depended almost entirely upon the good faith of the contracting parties would seem to indicate that a majority of the men engaged were honest and upright, and standards in the business world fairly high. An opportunity to test the soundness of this suggestion is offered by four or five orations of Demosthenes. These are arguments of counsel delivered before a court in the course of litigation arising from just such transactions as have been outlined. From them we can get a fair idea of the types of business men who took part, in one way or another, in this trade, and can learn something regarding the details of their activities.

CHAPTER II

THE CAPITALIST

IT must not be thought, from the use of the word "capitalist," that the various individuals who lent money upon maritime ventures corresponded at all to those of whom we speak today as capitalists, or constituted a definite class in the business world of Athens. I am using the word merely to designate the first of the three parties in a shipping venture, the man who provided the capital. So far as can be learned from our sources, a great many people of all sorts and conditions engaged in this profitable pursuit. The high rate of interest upon shipping ventures, usually between 20 and 30 per cent for a period of a few month's time, made them extremely attractive. Then, as now, people who had a little money to invest were tempted by the promise of large and quick returns, and, if they thought at all of the risk involved (in case the ship was lost the borrower was freed from his obligation), it did not deter them from employing their capital in this way. A great many Athenians representing all ranks of society had money in shipping ventures, and we seldom encounter an inventory of a large estate which does not include a substantial investment of this kind. The father of Demosthenes, apparently a cautious and successful business man, used some of his surplus funds in this manner, and the orator's uncle, Demon, of whom we shall hear more later on, was evidently inclined to "take a flier" now and then.

Some historians speak as though bankers were in the habit of financing these shipping ventures, but I am inclined to think this was not usual. To judge from the single instance in which we have detailed information regarding bankers' investments, they preferred the safer loans upon the security of real property, as is the case nowadays, despite the fact that these were not so profitable as successful bottomry speculations. On the other hand, it is not impossible that bankers were willing to finance the general operations of responsible and well-established firms, whose undoubted solvency reduced the element of risk to a minimum.

We are chiefly concerned, however, not with the individuals who merely take a flier in the grain trade now and then in the hope of augmenting an income derived mainly from other sources, but rather with the men who made this their business year in and year out. In some instances these are Athenian citizens apparently of wealth and prominence, but in a majority of cases they are resident aliens who have removed to Athens from other cities, attracted by the opportunities offered by the extensive commerce of the Piraeus. It will be not uninteresting to pass in review a number of these men as they are presented to us in the pages of Demosthenes and try to get some idea of their personalities and their standing in the community.

One of the most interesting firms is that of Chrysippus and a partner whose name is unknown. They are apparently not Athenians, but resident aliens, though they have been engaged in operations in Athens for many years. The house seems to be old and well estab-

lished, for not only has it an agent or correspondent at Bosporus in the Crimea, but one of its slaves is located in the same port. Its operations have unquestionably been successful, since Chrysippus speaks of two occasions on which he and his partner made princely donations to the public treasury in times of famine, and of another on which they imported more than 10,000 measures of wheat and sold them at a low price in order to relieve public distress. It is the boast of these worthy gentlemen that during all of the years they have been in business in Athens they have never been obliged to appear in court either as plaintiffs or defendants—previous to their unfortunate meeting with the unprincipled scoundrel whose dishonesty has compelled them to bring suit in the present instance.

Other firms which figure in actions under the "law merchant" are Androcles and Nausicrates—who are evidently men of the same general stamp as Chrysippus and his partner—and Darius and Pamphilus, who give the court an affecting picture of the sorrows which befall the capitalist when he has to do with the tricky scoundrels who infest the Piraeus:

> We whose business it is to finance shipping ventures and put our capital into the hands of other men know only too well that the borrower has the advantage of us at every point. He takes our good money, actual cash in hand, and leaves us a bit of writing on a sheet of paper which costs a penny or so, his agreement to deal honestly by us. As for us, we don't merely promise to pay, but actually pay down the money to the borrower on the spot. What, then, is the security we receive when we make a loan, and what assurance have we of getting back our money? We trust in you, gentlemen of the court, and in the law, which provides that all

contracts entered into voluntarily shall be valid. Yet, in my opinion, neither law nor contract offers any security whatsoever if the borrower is not a man of upright character and is not either afraid of the courts or ashamed to violate an agreement.

Another of the men whose business is the lending of money on shipping ventures—his name, unfortunately, is not known to us—is an elderly gentleman who was for a long time a merchant adventurer, and made voyages in the course of his trade. In this way he has amassed a moderate capital and, having retired from active adventures, resides in Athens and lends his money to those who follow his former calling. He is still well acquainted with the harbors of the eastern Mediterranean and with a great many merchants and sea captains. He is also on good terms with an Athenian banker, who is willing to lend money to others upon his indorsement. On the whole, he seems to be a shrewd and cautious business man, though fated to meet more than his match in one of the rascally adventurers with whom he comes in contact—Apaturius, by name—who is suing him for a substantial sum of money.

We hear of a number of other individuals or firms engaged in this business, some of them Athenian and others alien, but they are names and nothing more.

CHAPTER III

THE MERCHANT ADVENTURER

IT need occasion no surprise that the gentlemen engaged in financing the Athenian grain trade appear to be without exception substantial, public-spirited citizens, incapable of unfairness or dishonesty, who are an asset to the city by reason of their liberality and their spotless integrity. In all the orations from which our information has been gleaned the speakers are capitalists. Naturally we get their side of the case and their own modest estimate of themselves and other members of their class. Unfortunately we have no argument in a case of this kind in which the speaker is a merchant adventurer. We do not hear his side at all, and we have to take with a very considerable amount of salt what the capitalist has to say of the adventurer, both individually and as a class. If we were to accept unhesitatingly the *ex parte* statements of fact contained in these speeches we should conclude that the merchant adventurers were without exception scoundrels and swindlers of the worst description. This, of course, cannot have been the case. As has been observed, the trade could not, and would not, have been maintained on the basis of this type of contract had not the majority of the adventurers been honest and upright men.

Before we continue, however, the attempt to determine exactly how honest and upright the merchant adventurers were, it will be well to see what use can be

made of the interesting array of facts alleged in these five orations. Although we cannot, of course, accept them as literally true, since we have not heard the argument or the evidence presented to the court by the other side, we can take them as fairly faithful descriptions of the various types of rascality that might be practiced upon the unsuspecting by swindlers and sharpers. For it is quite obvious that no one of the speakers would be so foolish as to accuse his opponent of practices that were unknown or improbable.

The first portrait in our rogue's gallery is Zenothemis, plaintiff in an action in which Demosthenes' uncle, Demon, is the defendant, and hero of one of the most interesting instances of barratry reported by an ancient writer. The circumstances, according to Demon, were somewhat as follows: He had lent an adventurer named Protus money with which to purchase corn in Sicily for import into Athens. Zenothemis, a merchant adventurer, had taken passage in the ship in which Protus sailed, and the captain was named Hegestratus. In Syracuse Hegestratus and Zenothemis borrowed large sums of money by the simple expedient of exhibiting Protus' cargo to the lenders and offering it by way of security as if it were their own. After they had set sail the two swindlers, aware that their fraud must be discovered when the cargo reached its destination, resolved to sink the ship. During the night they put out a small boat in which to make their own escape, and Hegestratus slipped down into the hold to cut a hole in the bottom of the ship. Unfortunately for the success of their scheme, the noise he made led to his detection by the

passengers, and to escape immediate violence at their hands he jumped overboard, failed to catch the boat, and was drowned.

His confederate, Zenothemis, after vainly attempting to prevail upon the passengers and crew to abandon the vessel, was carried along in the ship to Cephallenia. Here, while the ship was being repaired, he tried to effect a change of destination and have her brought to Marseilles, his native town, instead of Athens. But the courts in Cephallenia, to which the question was carried, probably by Protus, enjoined that the vessel should be taken to Athens, her original port of destination. Zenothemis, however, even when he had reached Athens, was not yet at his rope's end. When Demon and his partners, duly notified by Protus, came down to take possession of the cargo according to the terms of their contract, Zenothemis claimed that it belonged to him, alleging that it had been bought by Hegestratus, to whom he had lent money for the purchase. Protus and Demon were compelled to use force in preventing him from unloading and disposing of the cargo, with the result that Zenothemis made Demon defendant in the present suit. How it came out or who was in the right we cannot say. It would be interesting to have the argument delivered by Zenothemis or his counsel, and to hear the other side of the story.

Phormion, another merchant adventurer, is accused of a swindle somewhat similar to that attempted by Zenothemis and Hegestratus, though not so spectacular. Chrysippus and his partner lent him a considerable sum with which to purchase goods for shipment from Athens

to Bosporus in the Crimea. The merchandise was to be sold in Bosporus, and with the proceeds Phormion engaged to purchase a return cargo. This, when brought to Athens, was to be turned over to the lenders as security until the loan should be repaid. Phormion had the privilege, in case he did not wish to ship a return cargo, of repaying the loan to the master of the vessel in Bosporus with interest at a somewhat higher rate. According to Chrysippus, Phormion immediately proceeded to borrow additional sums upon the security of his supposititious cargo, and did not, as a matter of fact, ship goods representing anywhere near the value of his total obligations. To make matters worse, when he arrived in Bosporus he found himself in the midst of war-time conditions and with no market even for the few wares he had brought. When the master of the ship called upon him to load a return cargo, according to the terms of his contract, he said he was unable to do so at the time owing to the difficulty of selling his goods, and told the captain to put to sea, stating that he would ship his cargo in another vessel. The ship in which he was to have sailed was lost at sea, and Phormion saw a chance to be quit of his obligation. When payment was demanded he at first alleged that the vessel had contained his return cargo, and his obligation was terminated by the shipwreck. Upon finding out, however, that Chrysippus was able to establish the falsity of this assertion by the testimony of the captain and others who had escaped from the wreck, he put forward a new defense, namely, that he had paid the money to the ship captain in Bosporus. Chrysippus and his partner sued to re-

cover principal and interest, and the case came into court on the issue raised by Phormion's story, whether or not the money had been paid in Bosporus. Here again we do not know whose claim is just or how the case terminated, but it does give an interesting illustration of a sort of fraud that was sometimes perpetrated by unscrupulous traders.

Very similar to this is a swindle of which Artemon and Apollodorus of Phaselis in Pamphylia are accused by Androcles and Nausicrates. This firm made a substantial loan to Artemon and Apollodorus with which to transport wine from a port in the northern Aegean to markets on the Black Sea. Here the cargo was to be sold, and a return cargo purchased. As usual in such agreements, the return cargo was to be turned over to the lenders as security upon its arrival in Athens. Like Phormion, the borrowers negotiated additional loans, failed to ship merchandise which constituted adequate security, and failed also to ship a return cargo. In this case again the ship in which they had sailed from Athens was wrecked, and they at first attempted to set up the defense that their return cargo had been lost at sea. Artemon died in the course of the litigation, and the present action is between the lenders and Lacritus, the brother and alleged heir of Artemon. The defendant has attempted to bar the action on the ground that there has been no contract between himself and the plaintiffs. It would seem on the face of it that Androcles and Nausicles are very likely to lose their money.

In still another case we see how utterly dependent the capitalist was upon the good faith of the merchant

adventurer. Darius and Pamphilus made a loan to Parmeniscus and Dionysodorus for a venture from Athens to Egypt and back. The agreement contained an express stipulation that the vessel was not to discharge her return cargo at any intermediate port. If that should be done, the borrowers were to be held for double the amount due on the face of the contract. Parmeniscus made the voyage to Egypt, sold his wares, and purchased a return cargo of corn. When he arrived in Rhodes, however, on the homeward voyage, he received a message from his partner, Dionysodorus, who had remained in Athens, advising him that the price of grain had fallen and it would be more profitable to sell elsewhere. Consequently, in violation of the agreement, he sold the grain in Rhodes. When Darius and Pamphilus learned of this proceeding they demanded repayment, together with the penalty stipulated for failure to bring the cargo to Athens. Dionysodorus refused to pay, alleging that the ship had been forced to put into port by reason of her unseaworthy condition. He offered to repay the loan with interest calculated for the voyage as far as Rhodes, but only on condition that the contract be destroyed and the borrowers released from further responsibility. This the lenders refused, and after an unsuccessful attempt to settle the dispute by the arbitration of other business men, action was brought against Dionysodorus and his partner to enforce payment under the terms of the contract. If we may believe the plaintiffs, Parmeniscus had been using their money for two years prior to the trial to carry on trade between Egypt and Rhodes, and they had been unable to recover either principal or interest.

When Demon complained to the court that the Piraeus, the port of Athens and center of her sea-going commerce, was infested with gangs of swindlers, he unquestionably had in mind such characters and practices as have been described. An interesting side light on the methods of these sharpers is gained from a case in which a ship does not enter the regular port, where it will be subject to the official supervision of the harbor and customs officers, but puts into an anchorage outside of the port limits. This little harbor had become so much the resort of smugglers and swindlers that it was known as "Thieves' Harbor."

As has been observed, we cannot form an estimate regarding the character and standards of the merchant adventurers from the statements contained in these five orations. The capitalist would not have lent his money upon a contract affording so slight security, nor could a commerce of these proportions have been carried on successfully under such contracts, had not the great majority of the merchant adventurers been responsible and honest. The speeches give us, it is true, an interesting picture of various sorts of swindlers who were undoubtedly to be met with all too often in the cosmopolitan crowds of traders and sailors who thronged the Piraeus. But it would be no more reasonable to regard these instances as typical than it would be nowadays to derive our notions of bankers from a few arguments of counsel delivered in prosecutions of defaulting officials, or to judge the men engaged in the oil industry from the records of proceedings against wildcat speculators. We are

forced to the conclusion that the merchant adventurer is better depicted in the portrait of the defendant in the Apaturius case—the man who gradually amassed a competence in the honest and industrious pursuit of his trade, and then, after retiring from active trading, employed his capital to finance the ventures of others.

CHAPTER IV

THE SHIP CAPTAIN

THE captain or owner of the ship which transported the merchant adventurer's cargo of grain does not figure so prominently in the operations described as do the men who financed and conducted the ventures. In one or two instances, however, we have some information, again not always trustworthy, in regard to individuals. Hegestratus, owner of the ship in which Protus transported the cargo bought with Demon's money, is described as a consummate rascal. If we may believe Demon's story, he was the principal in the swindle perpetrated upon the capitalists of Syracuse, and Zenothemis was merely his agent and accomplice. Hegestratus lost his life in the attempt to sink his own ship. One may well ask how the owner of a ship would be willing to sink her in order to perpetrate a fraud of this kind. The obvious answer is that the sums borrowed by Hegestratus and Zenothemis in Syracuse, which would accrue to their profit if the ship were lost at sea, were greater than the vessel's value. It is, furthermore, extremely probable that there was already a heavy lien upon the vessel and crew. As will be seen from instances which are to follow, the shipowner was not infrequently owner merely in name by reason of the fact that he operated entirely upon borrowed capital.

The situation we have assumed in order to account for Hegestratus' willingness to sink his ship is made

more credible by the case of Apaturius, the next ship captain on our list, whom we have met in another connection. Apaturius had a ship engaged in the grain trade, but it was mortgaged for a large sum of money. His creditors were about to foreclose and take possession of the security when he had the good fortune to meet the old gentleman with whom he is later found in litigation. This gentleman was persuaded to pay off the lien and take a mortgage of the ship and the slaves who constituted its crew. Later he had reason to suspect that Apaturius was planning secretly to take the ship and crew away from port in order to avoid the obligation. He then foreclosed, the ship was sold, and the amount of the loan recovered. It is clear from this account that some, perhaps many, of the men who are spoken of as shipowners possessed merely a nominal ownership. Like the merchant adventurers, they did not put any capital of their own into the business, but operated entirely upon borrowed money, purchasing with this both ship and crew (except for the pilots, the crews of the merchant ships appear to have been generally slaves), and contributing only their own services.

In another instance, however, it looks very much as though we have to do with a wealthy man who owns and operates a number of ships, somewhat as a marine transportation company does today. Lampis, captain of the ship in which Phormion transported his cargo to Bosporus, is spoken of as a "servant of Dion," a phrase which is also used of his crew. Now Lampis evidently had some means of his own, since he was able to make a considerable loan to Phormion. Hence, if we are correct in

regard to his relationship with Dion, it is extremely probable that the latter was a shipowner on a large scale, with perhaps an extensive capital employed in the business. As regards the personal integrity and responsibility of Lampis, we must set down to his credit the fact that he endeavored to compel Phormion to live up to the terms of his contract and ship a return cargo in Bosporus. If captains generally undertook to represent the interest of the lenders we can better understand how money could be lent upon respondentia contracts with some assurance of its recovery. Unfortunately, it would appear from the speaker's further narrative that Lampis did not continue in the strait and narrow path, but finally was persuaded by a bribe to connive at Phormion's dishonest schemes.

Hyblesias, captain of the ship in which Artemon and Apollodorus transported their cargo, seems to stand somewhat higher, both in character and financial rating, than the men with whom we have just made acquaintance. He had a partner, by name, Antipater, and it would seem that Hyblesias owned the ship, while Antipater provided the crew. Both partners are presented as witnesses in the proceedings for recovery of the loan made to Artemon and Apollodorus, and so far as can be discovered their honesty and fair dealing are never questioned.

Dionysodorus and his partner Parmeniscus, whom we have already met with as merchant adventurers, seem themselves to have owned and operated the ship in which their cargoes were carried. Apparently Parmeniscus voyaged with the ship and transacted the busi-

ness of the firm in foreign ports, while Dionysodorus represented their interests on the Athenian exchange.

It is reasonably clear, even from these few instances, that the ship captains and owners were men of widely different types and various degrees of financial strength. There was apparently the wealthy shipowner, like Dion, who devoted a large amount of capital to the operation of his ships and the maintenance of the slaves who constituted the crews. There was, again, the man in the position of Hyblesias and Antipater, who owned and operated only a single ship, but apparently held that ship free from encumbrance and provided his own capital. And there was a third class, comprising ship captains who were merely the nominal owners of their vessels, like Hegestratus and Apaturius. Finally, there must have been other men or firms who, like Parmeniscus and Dionysodorus, were at one and the same time shipowners and merchant adventurers. We cannot say positively which class predominated, though we get a distinct impression, by the time we have studied through the cases, that the typical ship captain is the man who operates on borrowed money and contributes only his time, skill, and energy. If this be the case we shall have to admit that the ship captains, as a class, cannot have been more responsible in a financial way than the merchant adventurers, and the capitalist's security in lending upon a respondentia or bottomry contract must have rested primarily upon the personal integrity of the men with whom he had to do.

If we undertake to discover why shipowners should operate upon borrowed capital and put no money of

their own into their business, the answer, I believe, is not far to seek. Navigation in the Mediterranean was still a precarious and dangerous enterprise. Ships were small and sailed badly as compared with modern vessels; at certain seasons of the year storms were of frequent occurrence; the coasts were treacherous and uncharted, and the pilot had nothing to guide him in holding to his proper course when out of sight of land except the position of the sun by day and the stars by night. Under such circumstances, it is clear, capital invested in a keel or a cargo ran great risk of loss. Consequently the man who could purchase a ship only by investing his whole substance was reluctant to take this risk, and very likely preferred to engage in a business which offered greater security with perhaps smaller profit. On the other hand, a skilful seaman would be ready to turn his abilities to profit while risking another man's money, and to sail a ship which represented someone else's investment. At the same time the capitalist of large means could well afford to put his money into this business, since the occasional loss of a ship would not wipe out his resources and the rate of interest was fixed sufficiently high to insure a profit, in the long run, over and above his losses. I am inclined to think that a ship captain, even if he had money to purchase and maintain a ship, would prefer to take out a bottomry loan to cover the value of the ship and crew rather than to risk the whole of his own capital. By so doing he would secure the benefits which are now found in maritime insurance, and in the event of his ship being wrecked at sea, the loss would fall upon the lender. The cost of such a loan he would

pass on to his patrons, just as the modern ocean transportation company figures in its tariffs the cost of insuring its fleet. In view of these considerations I am inclined to think that the majority of shipowners, as of merchant adventurers, were men of little or no wealth, who conducted their operations with borrowed money. Thus, in the last analysis, it was the capitalist who made possible the successful operation of this commerce, so vital to the existence of the city, upon a scale commensurate with the needs of the population, and it is easy to see why the Athenian state considered it advisable to enact laws which would give him the greatest possible security and encourage him to keep his resources employed in commercial ventures.

CHAPTER V

THE DISTRIBUTORS

HAVING traced, so far as possible, the processes of importation, and glanced at the various types of men who took part in them, we have now to consider the problems involved in the distribution of grain to the ultimate consumer. Inasmuch as the cargo, upon its arrival in the Piraeus, was required to be turned over to the lender as security, we might be tempted to conclude that it was the lender, and not the merchant adventurer, who sold it, performing the function that now pertains to the wholesale merchant. We do, in fact, find some instances in which capitalists engaged in financing the importation of grain act as distributors, but these are apparently exceptional and result from the necessity of meeting some emergency. Such was the instance described by Chrysippus, who tells of importing a large quantity of grain and selling it, probably direct to the people, at a very low price in time of famine. But it is far more likely, although grain cargoes were actually turned over to the lenders upon arrival, that sales were negotiated by the merchant adventurers. Obviously, the adventurer, whose profit or loss was directly determined by the price for which he sold, would not, as a rule, intrust the transaction to the lender, who would be more interested in quick sale than in a good price. We may conclude with but little hesitation that the merchant adventurer found the purchaser

or purchasers and made an agreement as to price and terms of payment, and the sale was frequently a three-cornered transaction in which the capitalist received the amount of the loan with interest, the importer took his profit, and the purchaser, the grain.

It does not appear that there were any large wholesale dealers who bought whole cargoes or many cargoes at a time and stored them in their warehouses to wait for rising prices, or, if rising prices did not come naturally, to force an advance. The existence of such an intermediate class was intentionally discouraged by the enactment of a statute forbidding any dealer in grain to buy more than a certain very limited amount at one time. The importer or merchant adventurer was compelled by law to sell the major portion of his cargo immediately. As a result, transactions were directly between the importers and the retail grain-dealers; as long as the laws were observed it must have been very difficult, if not impossible, to corner the grain supply or manipulate the market. The grain-dealer apparently sold directly to the ultimate consumer. We hear also of millers who deal in flour, and very likely buy from the importers on an equal footing with the retail dealers. The bakers, who are also known to have played an important part in the distribution of cereal products, no doubt bought from the millers for the most part, though there would seem to be no reason why any individual baker should not have milled his own grain if he cared to do so.

Briefly, the law of Athens prevented the hoarding of grain by the importer or its purchase in large amounts

by the retailer, and regulated strictly the profit to which the retailer was entitled. So important was the proper enforcement of these statutes to the public peace and well-being that a special board of grain commissioners was appointed, in addition to the ordinary port officials and market commissioners, and it was their particular duty to see that buying and selling were conducted honestly in accordance with law. There is perhaps no better way of giving an idea of these arrangements than to quote a short speech composed by the orator, Lysias, for a member of the Council who is representing the state in a public prosecution of certain retail grain-dealers. The defendants are charged with making purchases in excess of the amount authorized by law, with intent to corner the market and force an advance in prices. The violation of the law has been officially brought to the attention of the Council and a preliminary inquiry into the facts has been conducted by that body. As a result of its findings the case has been referred to a popular court for trial. It is at this trial that the speech which follows was delivered for the prosecution:

Many people have come to me, gentlemen of the court, expressing surprise that I conducted the prosecution of the grain-dealers before the Council; they tell me that, although you may be thoroughly convinced of the defendants' guilt, you none the less consider the men who speak for the prosecution to be actuated by dishonest motives. Consequently I wish to begin by explaining the circumstances which have compelled me to prosecute.

When the presiding officers brought this case before the Council, the members were overcome by indignation. In fact, some of the speakers said the defendants ought to be handed over to the police commissioners to be put to death without trial. But I con-

sidered it outrageous that the Council should become accustomed to act in such a way, so I got up and said I was in favor of trying the grain-dealers according to law; if they had been guilty of actions deserving of death, you would be no less able than we, in my opinion, to reach a just decision; if, on the other hand, they were not guilty, certainly they ought not to be put to death without trial. When the Council pronounced in favor of this proposal, my opponents attempted to discredit me, saying I had voiced these arguments with a view to the acquittal of the dealers. Now I made a sufficient defense to these calumnies, as regards the Council, by my conduct at the preliminary trial before that body. When the other members remained silent, I got up and spoke for the prosecution, and I made it clear to everyone that previously I had not been speaking in behalf of the defendants, but taking the part of law and order. This was my motive in undertaking the prosecution in the first place, fear of these calumnies, but I think it would be dishonorable to abandon it before you have made your decision upon the case.

[Here the speaker summons one of the defendants to the stand for interrogation]:

To begin with, come up to the stand. Tell me, please, are you a resident alien?

"Yes."

And does your residence in Athens imply that you are to obey the law of the state, or to do whatever you please?

"That I am to obey."

You admit, do you not, that you ought to be put to death if you have committed an offense against the law for which the death penalty is prescribed?

"I do."

Come, answer this—do you acknowledge that you bought up more than fifty measures of grain, the maximum amount the law permits?

"I did so, but with the authorization of the Commissioners."

[The defendant goes down from the stand.]

Now then, gentlemen of the court, if the defendant can establish the existence of a statute which permits dealers to buy up grain provided the Commissioners authorize it, acquit him; otherwise you must find him guilty, for the prosecution has presented to you the statute which forbids anyone in the city to buy up more than fifty measures of grain.

By all rights, gentlemen of the court, what I have already said ought to be sufficient in the way of accusation. The defendant admits he bought up the grain, the law manifestly forbids it, and you are sworn to judge according to law. But nevertheless, in order that you may be convinced he is lying when he tries to implicate the Commissioners, I am compelled to go on and state the case at somewhat greater length. When the defendants tried to put the responsibility upon the Commissioners, we summoned the latter before us and interrogated them. Four of them said they knew nothing at all of the matter. But Anytus said that last winter, when grain was high and the dealers were bidding against one another and fighting among themselves, he advised them to do away with this competition; he thought it was advantageous for you, the consumers, that they should purchase as cheaply as possible, since they are required to sell at no more than one obol of profit. Now I shall bring Anytus himself to the stand to prove he did not authorize them to buy up grain and store it away, but merely advised them not to bid against one another.

[Anytus comes to the stand and attests his deposition.]

I shall now present evidence to show that Anytus made this suggestion during the tenure of last year's Council, while the defendants are found to have bought the grain during the present year.

[A deposition is presented to the court.]

You have heard the evidence, that they bought up the grain without being authorized by the Commissioners. However, it is my feeling that their statements on this point, even if they were entirely true, would be no defense of their actions, but rather an accusation of the Commissioners. Where we have statutes explicitly enacted, surely those who violate them, and those who authorize the violations as well, deserve to be punished.

However, gentlemen of the court, I think they will not resort to this line of argument. Very likely they will say, just as they did in the hearing before the Council, that they bought up the grain as an act of kindness to the state, in order to sell it to you at the very lowest possible price. But I will give you very clear and convincing proof that this assertion is false. If they were really acting in your interest, it should appear that they sold at the same price for a long period of time, until the stock they had bought up was exhausted. In actual fact, however, they sometimes advanced the price as much as a drachma in the course of a single day—as if they had been purchasing a measure at a time. I will present witnesses to prove the truth of this statement.

When these men are required to pay a special tax which everyone is going to hear about, they are reluctant, and plead their pretended poverty as an excuse, but when they have done something for which the punishment is death, and which it behooved them to keep secret, they make the outrageous assertion that their illegal acts were on your behalf. Yet you are all aware that they are the very last men who ought to put forward such a plea, for their advantage is diametrically opposed to that of other people. They make their greatest profits when some public calamity becomes known and the price of grain goes up. They are so delighted to learn of your misfortunes that, in some instances, they find out about them before other people, and in others, themselves concoct false news of disaster—that the grain fleet in Pontus has been lost, or has been captured by the Lacedaemonians, or that the truce is going to be declared at an end. So truly is their position that of an

enemy that they seize the very same occasions as do your foes for the execution of their designs against you. When you happen to be most in want of grain, they get their hands on the supply and are reluctant to sell—to the end that we may not quarrel about the price, but may be content if we can purchase and carry home the least little bit. As a result, sometimes when we are at peace we are literally beleagured by these men. So long has the state been aware of their rascality and ill will that you appoint a separate board of grain commissioners for the sole purpose of supervising this business, although you intrust the market commissioners with the supervision of all other commodities; and there have been frequent occasions on which you have inflicted the severest penalties upon grain commissioners, notwithstanding that they were Athenian citizens, because they were unable to curb the rascality of these profiteers. And yet what penalty ought you to inflict upon the actual offenders if you punish men with death for being unable to restrain them?

You must realize that it is impossible for you to acquit the defendants. Why, if you are going to acquit them when they themselves confess to having formed a combination against the importers, it will be thought you have designs upon the merchants who come to our port. If they were offering some other defense, no one could find fault with the judge who might vote to acquit them, for it rests with you to believe whichever statement of the case you wish. But, as it stands, surely it would be considered outrageous to dismiss unpunished men who plead guilty to lawless acts. Recall, gentlemen of the court, how on many previous occasions you have put to death men charged with this same offense, although they denied their guilt and presented evidence, because you found the statements of the prosecution more worthy of your credence. Yet would it not be absurd, where the same offenses are concerned, that you should be more inclined to punish men who maintain their innocence than those who acknowledge their guilt? Furthermore, gentlemen, I think it is clear to everyone that trials of such offenders are of the very widest interest to the inhabitants of the city, and all will wish to know your decision in these cases.

They feel that other grain-dealers will be more law abiding if you put these men to death, but you will have conferred upon them absolute impunity to do whatever they may wish if you let these men go unpunished. You ought to punish them, gentlemen of the court, not merely in requital for their past transgressions, but also as an example for the future. Even so we shall barely be able to stand their exactions. Consider how many men who follow this trade are brought to trial on capital charges. So great are their gains that they would rather stand trial every day on a capital charge than give up the profits they get from cheating you. You could not fairly feel pity for them even if they entreat you and supplicate you. Much rather ought you to pity the citizens who have died through their villainy, and the importers, against whom these men formed their combination, whom you will gratify and encourage by punishing the defendants. If you don't, how do you think the importers will feel when they hear you have acquitted the hucksters who confess to forming a combination against the merchants who come into our harbor?

I think I need say no more. In the case of most offenders the prosecution is obliged to explain the nature of the offense, but the knavery of these men is familiar to you all. If you convict them, you will give a just decision—and you'll buy your grain more cheaply; if not, you will pay a higher price.

The attempt to deduce from this little speech the general feeling of the Athenian populace toward the grain-dealers and the relation in which the latter as a class stood to the state is of course a mistake. We might as well get our notions of the dairy industry from a report of what an enthusiastic member of the Housewives' League might have to say of milk distributors in an investigation of the price of milk. We must remember that the gentleman who delivered this speech—apparently a consciously important man, rather well along in years—was but one of several members of the council who ap-

peared before the court on behalf of the prosecution. This is indicated by the character of the speech and by its brevity. Our old gentleman wished to make a neat and effective appearance, and being apparently a man of some means, he employed Lysias to write him an argument. With the instinct of an artist Lysias confined himself to one or two points, namely, a logical exposition of what a strict interpretation of the law implied, and a dexterous appeal to the prejudices of an audience which felt it had been the victim of profiteering.

For all its incompleteness, its bias, and its brutal *naïveté,* we can learn a good deal from this brief speech, and one who has read attentively can form a pretty good notion of the way in which grain was distributed to the ultimate consumer. The retail grain-dealer was evidently in business on a small scale. He found it very tempting, when opportunity offered, to profit by the scarcity of his commodity and the resulting high prices, as is unfortunately the case with many tradesmen even in these enlightened days. Consequently we must believe that there were times when the Athenians were robbed by the dealers, that there was reason for the enactments by which they attempted to regulate the trade, and perhaps some justification for the popular indignation which encouraged our speaker to utter his brutal peroration. The Athenians, however, seem to have enjoyed one advantage over us. When they were robbed, they were robbed by bona fide dealers, whose regular occupation was the purveyance of cereals, who under normal conditions performed an essential service to the community. They were not pillaged, as we sometimes are, by speculators

who have never handled a pound of sugar or a bushel of wheat, who very often perform no useful service to society, whose sole interest in the commodity they happen to be buying and selling is directed toward the possibility of manipulating the market. As we read, we can only wonder what punishment the Athenians would have devised for men who made fortunes out of "futures" in wheat or other necessities of life. Despite the strong probability that torture was never employed by the Athenians as a public punishment, I cannot help feeling it would have been "something lingering."

Here, then, is the picture we have been able to sketch of the Athenian trade in grain in the fourth and fifth centuries, and of the individuals connected with it in one capacity or another. Obviously the personnel includes all sorts and conditions of men, from unscrupulous swindlers and rapacious privateers to benevolent philanthropists; but, as we have repeatedly observed, the majority were evidently men of integrity, who took pride in their fair dealing and valued the esteem and confidence of those with whom they had to do. When all is said and done we cannot but be impressed by the progress that had been made within a few centuries toward the creation and enforcement of satisfactory ethical standards in the intricate transactions of the business world.

PART III

BANKS AND BANKERS

CHAPTER I

INTRODUCTION

IF we would trace the evolution of banking practices from their primordial beginnings we should have to go very far back indeed, even farther than the ancient kingdom of Sumer and Akkad, with its flourishing commerce and its professional weighers and tellers of the precious metals. We should have to start with those primitive societies in which the only form of exchange was barter in kind, for even in those remote times many transactions which are now handled by banks were frequent and familiar—loans were made upon various kinds of security, mortgages were foreclosed, there were deposits and trusts. But our present purpose is not to outline the history of all the various transactions with which bankers have to do. It is rather to trace the development of banking as a specialized form of service to society, primarily concerned with monetary transactions. This definition of our subject naturally limits the inquiry to those times and places in which coined money was a common medium of exchange. It will begin with the appearance of coinage, in the commercial centers of Asia Minor, probably in the seventh century before Christ, and its earlier chapters will belong to the fascinating story of Greek culture.

Without some further explanation this distinction may seem unimportant and purely arbitrary. In an age when the Hellenes were still a nomadic and pastoral peo-

ple wandering beyond the northern outskirts of civilization, rich and powerful commercial houses were performing many functions of the modern banker in the great markets of the Babylonians. In still earlier times these same functions had been performed by the priests of the Sumerian temples. The whole body of commercial law and custom which the Greeks later took over as a foundation upon which to build their banking law and banking practice goes back apparently to these ancient priestly financiers, who kept the temple treasure and dominated the economic activities of the Sumerian city-state as completely as its religious and political life. Yet the oriental peoples from whom the Greeks borrowed so much did not develop banks in the proper sense of the word. They had many agencies for financial operations, ranging from the weighers of precious metals, and later the money-changers, to the great business houses of their merchant princes, such as the famous Murashu Sons Company of Nippur; but none of these agencies was ever evolved into a bank, an institution whose activities are primarily concerned with money and extend to all varieties of monetary transactions. Their money-changers continued to be money-changers and nothing more, and their merchant princes never came to specialize in finance as distinct from the general field of business. The development of the bank was reserved for the Greeks, and was a product of the peculiar political environment in which the latter people learned to use coined money as a universal medium of exchange.

Students of economic history have not as yet given to Greek banking the attention it deserves. That it

forms the connecting link between obscure Asiatic origins of many financial transactions and the system of banking and banking law disseminated throughout the ancient world under the Romans is, of course, quite obvious. But Greek banking was much more than this. The Greeks were not merely handing down an older tradition, to be amplified and perfected by their Roman successors. Under the pressure of new problems they devised a new type of financial institution, and this in turn affected the whole structure of business law and usage. In the realm of business, as in every other department of human activity, they completely reformed the principles and practices borrowed from their eastern neighbors. Greek finance, banking, and banking law are just as truly products of the Greek genius as are Greek art and architecture, Greek philosophy and science, literature and politics. We shall find in the legislation which regulates the transactions of finance the same simple, practical, and orderly character that this people has elsewhere so uniformly manifested.

There can be little question that the Romans derived the fundamental principles of banking from the Greek colonies along with the use of coinage; we need only study the phraseology of their banking law as it is exhibited in the pages of the *Corpus Juris* to realize how great was their indebtedness to their predecessors.

One of the striking things about Greek banking is that from the very start it grows out of monetary transactions. This is quite unlike the early history of English banking, for example, which seems to have originated in the practice of making deposits with goldsmiths, and for

a long time to have constituted an incidental activity, a side line, in fact, of men whose chief interest was not primarily in transactions of a purely financial character. The Greek bankers, as their name implies, came into existence as the result of a necessity created by the introduction of coinage. From the very first their activities had to do with the use of money. The Greek word for bank is *trapeza,* which means "table," or "counter." From this is derived the word *trapezite,* the usual appellation of the banker, which means originally "the man at the table." As may easily be seen, the banker was in origin the money-changer, the man who had a table in some public place near the market district of a great city, whose business it was to exchange the coinage of one city for that of another, according to the needs of his patrons.

The extent of this business and its importance to the successful conduct of trade and industry cannot be appreciated without some knowledge of the extremely complicated monetary problems with which the Greeks were confronted. These problems were engendered by the existence of a great many petty independent states, scattered throughout the islands and along the shores of the Aegean, many of them, perhaps most, having their own systems of coinage. It is hard to say precisely how many independent systems there were, but there must have been at best so many as to hamper and embarrass trade very materially, despite all that could be done by the expert money-changer. Although an approach was sometimes made toward a solution of these difficulties

by adopting as a general standard of exchange throughout a certain region the coinage of some wealthy and important state with extensive commercial activities, there was never, at least in the fifth century, any single system which prevailed to the exclusion of all others. When the money-changer came, he came to stay, and he made himself constantly more and more useful to society by applying himself to the problems that were successively created by the growth of commerce and industry. Before we undertake to discuss his activities in detail, however, it will be well to turn for a moment to the early history of Greek coinage.

Coined money was quite unknown in the Homeric age, and all exchange took the form of barter of commodities in kind. The unit of value most commonly employed in the estimation of wealth was the worth of an ox, but occasionally there are allusions in the Homeric poems to "talents of gold." These were, of course, not coins, which had not yet been invented, but they evidently constitute a stable recognized measure of value, and must have been definite amounts fixed by weight. This manner of using the precious metal the Greeks would quickly have learned from the Phoenicians, if they did not get it directly from their Minoan predecessors. Other metals, especially bronze and iron, were perhaps used in this way.

So near had the Minoans come to the invention of coined money that we wonder they did not take the final step. By dropping fixed amounts of molten gold upon a striated surface they produced pellets of definite weight,

marked on one side with lines, which must have been used as money. The baser metals, iron and copper, they cast in huge ingots, of which specimens have recently been unearthed by archaeologists in various ancient sites. The peculiar form of these ingots is evidently intended to represent the dried hide of an ox, and it has been credibly maintained that their value was the gold talent of the Homeric poems, which in turn represented the worth of an ox.

For some time prior to the coinage of the precious metals the Greeks used iron as a medium of exchange. For this purpose it was fashioned into slender rods, called obeli, which meant "spits" or "nails." Six of these nails made a handful or drachma, and here, as ancient etymologists noticed, we have the names of the Attic "penny" (obol) and "shilling" (drachma). This primitive iron money was used in many parts of Greece, and particularly in Sparta, a country very rich in iron; it survived down to historic times in the famous iron coinage of the Spartans, which was later thought to have been intentionally established by Lycurgus in the interest of frugal habits and good morals.

The earliest coined money of which we know comes from Lydia, in Asia Minor; the invention is perhaps to be credited to the Ionian Greeks, and may certainly be dated early in the seventh century. The coins are composed of electrum, an alloy of gold and silver much used by the Greeks in very early times. The Aeginetans were apparently the first Greeks outside of Ionia to make use of coined money, and for many years the Aeginetan

standard of weights and values was prevalent throughout the eastern Mediterranean. Toward the close of the seventh century, however, Athens began to issue a coinage based upon the so-called "Euboeic" system of weights, and as her wealth and commerce increased Athenian currency tended to supersede the Aeginetan as the standard.

CHAPTER II

FROM MONEY-CHANGER TO BANKER

THE use of coined money, once it was begun, spread throughout the Hellenic world with astonishing rapidity. Before two hundred years had passed every Greek city that was a city had its independent coinage—and we must not forget that the islands and shores of the Aegean were literally crowded with cities, each of them an autonomous sovereign state. The result of these conditions, especially in cities which served as markets for numbers of smaller communities, must have been confusion pure and simple, and out of this confusion, or out of the effort to avoid it, was born the banker.

It is, of course, quite obvious that the specie of the more important commercial centers must speedily have attained such general currency as to be accepted in commercial payments in many cities of the Mediterranean world. But there were also a great many coinages issued by small and unimportant states and useful only in transactions within the community. In addition to these, the coins of the wealthy non-Hellenic states in Asia, which must have been constantly in circulation throughout the important commercial centers of the eastern Mediterranean, must be taken into account. Since all these coins, of different metals, different weights, and different degrees of purity, represented a great many gradations in value, they could not be used interchange-

ably by the ordinary business man, who was obliged to have recourse to professional money-changers. These individuals, who made a careful study of all the different coins and knew their exact value, would, for a moderate commission, exchange for coins of one state their value in the coinage of another. In order to carry out this function successfully the money-changer set up his counter in some public place near the market—which was the business center—provided himself with a supply of the different coins that might be called for in the course of the day, and, with the help of his slaves, met the needs of the clients who came to him.

To illustrate simply the money-changer's normal activities, we may imagine that a man from some Greek trading colony on the Black Sea is planning a trip to Athens and back, stopping here and there at various cities on the way, and has in his possession only the coinage of his native state, which will not pass current at any great distance from its borders. Since money-changers are to be found, presumably, in almost every maritime city, he may conceivably take with him the coinage of his own state and exchange it for that of the states he visits as may suit his needs. But it may happen that his local coinage cannot be exchanged in cities outside his immediate locality without a considerable discount, which will increase as he gets farther from home. It will therefore be to his advantage to convert the money he intends to take with him into Attic money, or some other issue which will pass current almost anywhere and can be exchanged at par if it be found necessary to use a local coinage. Consequently the experienced traveler,

before setting out on a journey of any length, will go to a money-changer in his town and secure in some widely current coinage sufficient funds to cover the expenses of his entire journey, very much as a man today, when preparing to visit places where he cannot expect his personal checks to be readily honored without indorsement and identification, provides himself with travelers' checks or New York exchange. Thus, by a single transaction, he solves his monetary difficulties for the tour.

It is quite obvious that the money-changer who carried on business in an important commercial center was obliged to have constantly by him a fairly large sum of money in order to meet promptly the various demands of his patrons. From this it follows that he must have had facilities for the safekeeping of money and valuables. On the other hand, travelers in ancient Greece probably found the safekeeping of any considerable sum in gold and silver an annoying responsibility. And the custom must have arisen very early of not withdrawing the entire sum from the hands of the money-changer, but receiving credit to the proper amount and withdrawing the actual cash from time to time, as it might be needed. In other words, the money-changer was no longer simply a money-changer; he had begun to receive deposits and had taken the first step toward becoming a banker. Even his original occupation of exchanging money required that he be a man of integrity and moral responsibility, since the clients who had not his expert knowledge necessarily relied upon him to deal with them fairly; he could not depend entirely upon an attractive establishment and ample capital, but must have also a

reputation for strict honesty. When he began to accept deposits, his responsibilities were greatly increased, and it became even more important that his rectitude should be beyond question. One of the most striking facts about the Athenian banker of the fifth and fourth centuries is that his clients depended entirely upon his honor and honesty in their transactions with him; although it was the invariable practice to have witnesses present at every other business transaction involving the exchange of property or money, however slight the value, witnesses were usually not called in transactions with one's banker. Very probably this custom resulted from the circumstance that the money-changer, when he first began to accept deposits, did so merely as a favor to his client, at the latter's request. In this situation the client would naturally not think of calling witnesses, and a custom was begun which gradually extended itself to all transactions and became traditional in the banking business. Such a custom undoubtedly tended to put banking upon a high plane, and to give it the character of professional service.

The practice of receiving money on deposit soon became a major part of the money-changer's, or as we may now call him, the banker's, business. The difficulty of keeping safely large sums of money in gold and silver was felt not only by the traveler but by the man who stayed at home. Greek houses were extremely simple and in most cases probably lacked adequate facilities for keeping valuables in any large quantity safe from fire or theft. It was obviously the part of prudence to intrust one's cash, aside from the relatively small sums

that might be needed for the time, to the keeping of a reputable banker. This practice was not invariable, but the exceptions are in most instances men engaged in manufacturing or commerce on a rather large scale. The fact that such men as Lysias and the father of Demosthenes kept large sums of money in their houses does not prove that the average citizen did so. In both cases the houses were also offices and factories and undoubtedly had facilities for keeping safely the cash paid in by customers, which might be needed at any moment for the purchase of raw materials or supplies. Until the latter part of the fifth century a great many Athenians derived their incomes chiefly from their country estates. These were the people who would find it most to their advantage to avail themselves of the facilities offered by bankers. In somewhat the same way the banking operations of the London goldsmiths began with deposits from the rentals of country estates.

There was another motive than security, however, for depositing money with the banker. It was a very convenient way of providing for payments. A payment by one individual to another was ordinarily made in the presence of several witnesses and with a formality that must have been rather burdensome. Furthermore, since comparatively little gold was in circulation in Athens, payments were generally in silver, and the transfer of a large sum made it necessary to have slaves in attendance to carry the heavy sacks of coin. These formalities and difficulties the payer could avoid by depositing his money with a banker and then either taking a payee to the bank or sending instructions regarding payment in

writing or by the mouth of a confidential slave. If the payee was a client of the same banker, with a regular account, the transaction became almost as simple as the payment of a check today, being merely a transfer of credit from one account to another upon the banker's books. Unfortunately, we do not know whether payments in which two separate banks were involved were carried out in this way, or whether the cash was actually transferred from the bank of the payer to that of the payee, though it seems very likely, on a priori grounds, that the bankers of the fourth century had discovered this further simplification.

Obviously, the banker could not attend to the receipt and disbursement or the safekeeping of large quantities of specie without some remuneration, and it could not have been long before he perceived the possibility of making a profit by lending a portion of his deposits to responsible borrowers at interest, keeping on hand only a sufficient reserve to meet the payments that might be called for in the normal course of business. This course once entered upon and the profits it involved realized, the banks rapidly became loan offices, whose chief function was the lending of money at interest, rather than mere depositories or bureaus of exchange. As the financial operations of bankers developed and individual banks became richer and more powerful with the expansion of trade and industry, their activities were extended to public finance as well. The ancient banker probably found it advisable to keep a much larger cash reserve than would suffice under modern banking conditions, and it is safe to say, though we have no explicit evidence,

that his loans were for the most part loans of money and not of credit.

It is these maturely developed banking institutions, as they existed in Athens in the fourth century, that we shall now set ourselves to study somewhat more in detail. In fact, we know little or nothing of particular banks and individual bankers before the end of the fifth century. The earliest extant allusion to a banker relates to Philostephanus, who conducted a banking business in Corinth during the years that followed the Persian Wars, and is said to have received the enormous sum of seventy talents as a deposit from Themistocles. When we come to the fourth century, however, we are more fortunate. In the collection of speeches attributed to Demosthenes are a whole series delivered in the trial of various lawsuits in which Apollodorus, son of the famous Athenian banker, Pasion, was concerned. These are supplemented by a speech of Isocrates written for a client engaged in litigation with Pasion. The information they yield is corroborated here and there by allusions to banking transactions in other authors, and occasionally by inscriptional material. There are, unfortunately, many questions we would gladly answer that must be left unsolved, or dealt with conjecturally. But it is entirely possible, with what we have, to give a fairly complete account of Athenian banking in the fourth century, and to follow the fortunes of Pasion and his family from their humble beginnings to the time when his bank stood high among the financial institutions of the wealthiest and most progressive of the Greek cities.

CHAPTER III

BANK EQUIPMENT AND PERSONNEL

STRANGE as it may seem, on no subject connected with Athenian banking have we less information than on the physical plant. We know only that there were banks both in Athens and in Piraeus, and those in the city were not scattered here and there at random among other places of business, but occupied a distinct region in close proximity to the public square. It is not without interest to recall that this modest financial district was the favorite haunt of the philosopher, Socrates, and his friends, who used to assemble every morning near the establishments of the bankers to hold those discussions on the Good, the True, and the Beautiful so eloquently reported by Plato. The word used to designate the bank is still the same that was applied to the simple counter of the money-changer—*trapeza* (table)—though we may be sure that an establishment in which a considerable staff was maintained, with facilities for the meeting of clients, the keeping of books, the receipt, weighing, and storage of various articles of value, must have been a permanent structure of some size.

We are told that Pasion had slaves to receive articles given in pledge for money lent and see to their checking or weighing and their proper storage. The number so employed in what was probably the largest bank in Athens is nowhere stated, but we get a distinct impres-

sion that it was very considerable. In addition to the slaves required for such simple duties as did not require technical knowledge there were the more highly educated slaves who acted as cashiers and managers, who paid out and received money and saw that all transactions were properly entered in the bank's accounts. At one time a slave named Cittus was the cashier of Pasion's bank. He was succeeded by another of Pasion's slaves, Phormion, who was in charge of the bank for many years, first as slave, later as freedman, and still later as lessee and proprietor. Phormion, as will appear from a closer study of his career, was unquestionably a man of exceptional ability, and Pasion appears to have left the management of the bank entirely to him, spending most of his time at home or in the business district. It would seem that he held Phormion responsible for all ordinary transactions, while he himself acted as "outside man." When clients approached him on the "Exchange" in regard to loans he would take them to the bank and instruct Phormion to give them money. In general, the staff of a bank seems to have consisted of one or more proprietors (we hear of a number of partnerships), one or two able, well-trained slaves or freedmen to serve as cashiers and bookkeepers, and in addition as many ordinary slaves as the size and character of the business might render necessary. So far as we can discover there would be no opportunity for a young man of good family to enter a banking establishment and learn the business as many do today. Ordinarily a free citizen would be connected with a bank only as owner or lessor.

There are many allusions to the records and accounts kept by bankers, and we are fortunate in having a number of clear statements in regard to the manner of entering various transactions. When a client of the bank deposited a sum of money, with instructions to pay it to a certain individual, the banker was accustomed to write down first the name of the party depositing and the amount. He then entered in the margin, "To be paid to So-and-So." If the cashier was personally acquainted with the payee and there was consequently no necessity for identification, this entry sufficed. Otherwise, he noted also the person or persons who were to introduce the payee at the bank and identify him.

We get other interesting glimpses at the bookkeeping of the Athenian bank in connection with the lending of money and the receipt of deposits. "It is the custom with bankers," says Demosthenes, "to make memoranda of the sums which they advance and the purposes for which these are wanted, and of the sums which their customers deposit, so that they may be able, by knowing what has been received and what deposited, to balance their accounts."[1] The systematic and accurate character of the bookkeeping in Pasion's bank is strikingly attested by the evidence his son, Apollodorus, introduced in a number of lawsuits instituted several years after the transactions in which they originated. For example, his "bill of particulars" in a suit against the general, Timotheus, covered the transactions of several years; it gave the exact date and precise amount of each loan, the purpose to which it was to be applied, the name of the

[1] Kennedy's translation.

person to whom it was paid on the borrower's order, and other data. This extreme accuracy was not exceptional, as appears from the fact that a banker's accounts, when introduced in evidence, were accepted by the courts as prima facie evidence of the transactions therein entered. That this should be so is a striking testimony to the integrity as well as the business-like efficiency of the Athenian bankers. The accounts of bankers were sometimes ordered to be produced in court at the request of litigants, and there was a special process in Attic law by which such an order could be enforced. In *Apollodorus* vs. *Timotheus,* a representative of the defendant was permitted to examine the accounts of the bank and make copies of the entries which had to do with the transactions in dispute.

It appears further, from the passages in which bankers' accounts are mentioned, that most banks kept daybooks, in which all transactions were entered as they were completed, and also ledgers, which showed how the account of each individual client stood. As the Greek system of indicating numbers by the letters of the alphabet was not well adapted to numerical computations, the Greeks were forced to use "adding machines." These were probably of the simple type still used in many oriental countries.

CHAPTER IV

FUNCTIONS AND CLIENTÈLE

THE loans made by Athenian bankers in the fourth century ranged from trifling personal accommodations up to the large sums required by the state in times of crisis. From this it is clear that the clientèle of a prominent bank included men of all classes and ranks of society. Certain banks, however, were likely to cater particularly to certain types of clients, as is often the case today. It is quite obvious, for example, that a bank located in the Piraeus would have among its patrons a relatively large proportion of wholesale merchants and men engaged in shipping. A bank situated in the city proper would be more likely to do a general business, or to pay particular attention to loans on agricultural land. Pasion spent much time on the "Exchange"; he knew a great many business men; and his bank appears to have been extremely popular with the merchants and shippers in the Piraeus. This does not imply, as we shall see later, that he ordinarily made loans on bottomry or respondentia contracts. New customers were introduced at the bank very much as they are nowadays.

Athenian bankers were accustomed to render their patrons services of many kinds. There is no reason to believe that the banker of the fourth century had completely withdrawn from his original occupation of money-changer. It has sometimes been maintained that

by the fourth century bankers had ceased to perform this function, which had been taken over by men without sufficient capital to carry on a general banking business. There may very well have been in Athens small establishments which limited their activities to money-changing, but it would seem practically certain that the larger banks continued to perform a service for which they had excellent facilities. A strong bank with a large reserve would be able to meet demands for foreign coinage, especially that of small or remote states, much more easily than would the simple money-changer with little or no capital behind him.

We come now to the matter of deposits. Reasons have already been given for concluding that it was a general practice to deposit large sums of money with bankers, rather than to keep them at home. At any rate it is certain that the total amounts on deposit in a leading bank at any one time must have been quite large. In the bank of Pasion at the time it was leased to Phormion were deposited eleven talents. When the high purchasing power of money in these times is considered, this sum represents a very substantial fortune, sufficient to put a man in the Athenian equivalent of our millionaire class.

In some accounts of ancient banking it is maintained that bankers paid interest at a low rate upon deposits and depended for their profits upon the margin between the rate they paid and the rate they charged their clients for loans, as a savings bank does today. In others an attempt is made to distinguish two types of deposit, one on which interest was paid, and one which drew no inter-

est. I am inclined to believe that this is the result of a modern preconception, and that Athenian bankers of the fourth century did not pay interest on deposits. In two instances in which we have definite information on this point, interest was not paid. Clients apparently were induced to deposit their money principally for the sake of security and convenience in making payments, as in the case of a man who carries a commercial account in a modern bank.

There is no need to dwell long upon the next service which the banker performed for his clients, that of making payments at their order; its essential features have already been described, and its convenience and safety noted. There are a great many instances of such payments in our sources, and it is interesting to observe the similarity of ancient and modern practice in the matter of identification. If the payee was unknown to the cashier, the depositor who wished to make the payment would introduce him in person or send with him a slave who was known to the cashier.

The bank would also make collections for its clients and receive payments to be placed to their credit if so instructed.

We find that the banker would upon occasion act as surety or bail for clients. There must have been many occasions on which a service of this sort was required by foreigners or resident aliens who did not own property in Athens, but were known to their bankers to be men of responsibility, or even had substantial sums on deposit.

Bankers also received on deposit for the convenience of their clients any valuables it might be unsafe to

keep at home. Furthermore, written contracts, which were usually signed and deposited with a third party, were very often intrusted to bankers. There were many advantages in having a banker act as custodian. In the first place, he was likely to be a person of more than ordinary responsibility, with experience and facilities for the safekeeping of documents, and he made a good witness in case a lawsuit should arise upon the contract. In many cases, it is likely, the banker with whom a contract was deposited was also the one charged with paying or receiving the sums of money which might pass under its provisions, and there was undoubtedly a very valuable element of security in having the whole transaction under the supervision of an experienced and responsible person.

The principal business of the bank from the point of view of its owner, however, and quite as important to its clients as any of the services enumerated above, was the lending of money at interest. In Athens there was always a great deal of lending by individuals, both by way of business and as a matter of personal accommodation to friends, and Athenians frequently secured the money needed for some particular purpose by organizing a mutual loan association; but the man who needed a loan generally went to his banker. We hear of loans on various kinds of security. To take one or two instances that come to hand, money is loaned by a bank on a merchant vessel and the slaves who constitute her crew, on a mining plant and slaves, on the indorsement of another patron of the bank, in pledge; and finally, we have instances of unsecured loans, protected merely by the per-

sonal credit of the borrower. The great bulk of the money lent by banks, however, seems to have been secured by first mortgages on real property, for example, farms, dwellings, and apartment houses.

Modern accounts of Athenian finance often speak as though the bankers frequently lent upon bottomry and respondentia contracts, but there is no evidence to show that this was the case, as we have already observed in our study of the Athenian grain trade. An importer might purchase a cargo in a foreign port and give an order upon his banker to pay the purchase price or the freight charges or both upon its arrival in Athens, but in such a transaction the banker would no doubt take possession of the cargo, which constituted his security, and hold it until the debt was discharged; this was a very different sort of transaction from the respondentia loan, with its tenuous security. The only instance in which we are told how the deposits of a bank are invested is that of Pasion's bank when it was leased to Phormion. The entire deposits of the bank, together with Pasion's personal fortune, were lent upon the security of real property. It would appear from this that Athenian bankers were very conservative in making loans, as they had need to be, since most of them apparently operated upon a rather slight margin, and many of them had little or no capital of their own.

During the period in which the banks were developing from small beginnings the financial administration of most Greek states was such as not to require extensive credit on behalf of the state. Ordinary expenses of government were met from the funds which were constantly

coming into the treasury from taxation. Many services which are now performed directly by the state and paid for out of the treasury were then assigned to individual citizens or groups of citizens, and the apportionment of such public burdens among the wealthier citizens was in effect very much like the imposition of an income tax. In times of war or other crises requiring the immediate command of large sums of money the state would resort to the temples of the gods, which were, in practical effect, reserve treasuries, and would "borrow" from the god whatever sum might be needed for the purpose in hand. By the time, however, that the banks had developed into strong financial institutions controlling large sums in cash or credit the temple treasuries had become relatively poorer, in part as a result of actual depletion during the incessant warfare of the fifth century, in part by a great decrease in the purchasing power of money and the growth of private wealth. As a result of these or of other circumstances that cannot now be established, the state had come to realize the advantage, if not the necessity, of securing the co-operation and assistance of the financiers who were able to command vast resources in money or credit.

In the fourth and following centuries we hear repeatedly of large loans advanced by banks to their own or neighboring governments, and a number of interesting records of such transactions are found among extant Greek inscriptions. Phormion, in Athens, procured for the government, by means of his extensive credit in the money market, sums which far exceeded the greatest individual fortunes of those days. A particularly interest-

ing instance of the relations between banking houses and governments comes from Atarnae in Asia Minor, where the banker Hermias, who had advanced large sums to the government, eventually became sole ruler of the state. He was not merely the power behind the throne, but actually assumed its powers and prerogatives, as we shall see when we come back to him again.

There are several instances in which taxes are mortgaged to state creditors and collected by their agents. In one rather amusing case a Greek city pawned its citadel to a banker for a loan; the banker took possession of it, held it till the loan was repaid, and then, honestly enough, evacuated it. Another interesting development in Greek banking was the "all-night bank," not a new idea of the modern world, but at least as old as the third century before Christ. Caicus, a banker of some seaport city, probably Alexandria, made the following announcement: "To natives and to strangers this bank gives equal dealing; deposit and withdraw for the calculation comes to account. Let another make excuses; Caicus pays foreign moneys at request, even by night."[2] This was couched in the form of an elegiac quatrain and perhaps engraved in neat characters above the portals of his banking house. I cannot do better than quote an interpretation of this interesting little advertisement from the pen of a man who stands high in the financial world and in the realm of scholarship alike, Dr. Walter Leaf.

> This is clearly the advertisement of a bank in some busy port frequented by many strangers; it is their custom that is mainly sought. Fair dealings to strangers as well as to natives is the

[2] Leaf's translation.

opening theme; the changing of foreign moneys, *othneia chremata,* is the last. And we note that in one respect at least the practice of Caicus is actually in advance of that of the modern banker; he is prepared to cash his drafts at night. We can perhaps guess at the reason of this. In all the eastern Mediterranean, during the summer sailing season, the Etesian northerly winds arise during the daytime, and are often really violent in the afternoon. It is only at sunset that they begin to fall, generally to an almost complete calm, followed by a gentle land breeze. It is therefore about sunset that it is easiest to enter a harbor; and the invention of the lighthouse of Pharos at Alexandria had no doubt for its primary object the facilitation of such entry at, or after, dusk. It is likely enough that dusk and early night were the busiest hours of the twenty-four in lighted ports, all ships hanging about or timing their arrival so as to take advantage of the calm, and crowding in to their berths as the sun fell. One can see how the merchants, supercargoes, and masters would be entering the city in the early night as soon as their ships were properly berthed, anxious to get lodgings in the town, and for that purpose to provide themselves with the currency of the place. For such customers it might be well worth while for a bank to cater, by keeping very late hours. We may guess, then, that the bank of Caicus was at some busy port, most probably Alexandria, with its famous lighthouse on the island of Pharos.

It is likewise interesting to note that Caicus had perceived the advantage of dignified "high-class advertising." The verses which have just been quoted are ascribed to no less a person than Theocritus, and Dr. Leaf finds no reason for refusal to regard them as the authentic work of the famous poet.

CHAPTER V

RESOURCES—CAPITAL, SURPLUS, CREDIT

IF we should undertake to classify ancient Athenian banks according to their financial strength and the amount of their assets we should probably have to distribute them roughly into two classes: banks which represented a considerable investment of capital and therefore had resources additional to their deposits, and banks which had no resources and were really, as Phormion aptly terms it, "a precarious trading with other people's money." To us it seems strange that a bank could have been operated at all, even in times of prosperity and financial stability, without a fair amount of capital, but not a few Athenian banks evidently were in this situation. When Phormion leased the bank of Pasion he leased only the good will, the plant, and the deposits. At the termination of his lease the four partners who succeeded him as joint lessees took over the business upon identical terms of agreement. This, however, was not the only type of bank, for Phormion speaks of another kind of agreement, evidently not unusual, under which a lessee may be granted the use of a certain amount of capital along with the business and deposits.

It is quite impossible now to say which of the ancient banks we hear of belonged to the one class and which to the other, or even to form an opinion as to which type predominated. As one reads in the sources he gets a distinct impression that a great many of the

Athenian bankers operated, at least in the earlier part of their careers, with little or no investment of their own beyond what was represented by the plant and slaves. But it is evident that a man who carried on a banking business successfully for many years would gradually amass a considerable amount of personal wealth, representing his accumulated profits from the bank and his returns on them. Such an accumulation belonged in effect to the resources of the business, since it was probably invested in the same manner as the deposits and was subject to claims which might be brought against the banker by depositors. The process is well represented by the career of Pasion. Since he started as a slave, it is practically certain that he had little or no capital of his own when he first set up in business on his own account. At the time of his lease to Phormion he had, in addition to the deposits of the bank, a fortune of nearly forty talents, or more than three times the amount of the deposits, invested, along with the deposits, in loans upon real property. Here is apparently a close analogy to the growth of a modern bank's capital stock and surplus. If this analysis be correct, the resources of an Athenian bank would vary according to the ability and success of the individual banker and the length of time he had been in business. There would be no hard-and-fast classification into banks with and without capital, but we should proceed by slight gradations from new or unsuccessful banks to old, wealthy, and well-established institutions, like that of Pasion in the later years of his career.

We find no trace in the classic period of joint stock companies in the banking business, or of banks organized as corporations. The joint stock company was not unknown at this time, but its employment apparently was restricted to ventures of a magnitude too great for the resources of single individuals or even partnerships, such, for example, as the farming of the state taxes. In all the banking cases alluded to by Demosthenes the capital on which the bank operates appears to be the property of an individual or of the members of a partnership. Furthermore, the liability of the banker appears to be in every instance personal and not corporate. In the case of partnerships among bankers the partners were probably liable jointly and severally for claims against the bank, though this is merely an inference from general Athenian practice. The member of a banking partnership against whom judgment was levied for the total amount of a claim against the bank would no doubt have claims against the other partners for their ratable shares of the sum levied.

It need occasion no surprise, when banks were conducted on this easy going, laissez faire policy with whatever resources the individual banker was able to muster, that financial crises often proved disastrous and bank failures were by no means uncommon. We hear of one very serious "panic" which led to the failure of a great many Athenian banks, and there are frequent allusions to particular instances of failure. The banker, Aristolochus, we are told, when his bank became insolvent, was compelled to surrender his property in order to satisfy, at least in part, the claims of the depositors. Sosinomus,

Timodemus, and others who failed had similar experiences. Another banker who failed, Heraclides, found it prudent to travel abroad for a time, an incident which strongly smacks of the journeys to Canada occasionally made by bank wreckers a few decades ago. In this instance Heraclides probably was not absconding with bank funds which should have gone to the depositors, but left the country in order to avoid being mobbed by his patrons. From other allusions to these subjects it is quite clear that insolvent bankers were often the objects of intense public indignation.

In ancient Athens, as today, a failure might result from a run on the bank started by panic among the depositors; such a run, Demosthenes tells us, might be started by the banker's losing a lawsuit in which a large part of his resources was at stake. In this connection it is interesting to observe the precautions taken by the government in Miletus, several centuries after the period we are studying, to protect the bankers of the city from ruin after the enactment of a moratorium, or, to be more precise, a decree abolishing debts. To have extended such legislation to the transactions between bankers and their clients was of course out of the question; it would have deprived the depositors of their deposits, which would have become the property of the bankers, and the bankers of their loans. Consequently, banking transactions were excepted from the operations of the decree, and in order to protect the banks from the danger of a run upon them it was provided that they should have the privilege of liquidating any obligation incurred prior to the beginning of the fiscal year in ten equal annual pay-

ments. The same privilege was granted to those who had received loans from banks prior to the beginning of the fiscal year.

There was apparently no system of state supervision or control comparable to the attempts of modern governments to safeguard the interests of depositors, but in one instance we get a hint that something was done in this direction. When the bank of Heraclides failed and Heraclides left the country, the "guarantors" of the bank, we are told, took charge of the business and proceeded to realize whatever assets they could discover. Unfortunately we are not given any information as to their precise relationship to the bank, but it would appear they were men who had in some way become responsible for the bank's obligations and who acted somewhat as a receiver might today, endeavoring to save as much as possible of the bank's resources toward the payment of its obligations. It is too bad that we have no other allusions to instances of this sort and are given so little detail in the present case.

We have already alluded to the very great credit enjoyed by Phormion in the world of finance, by which he was enabled to provide the state with funds far in excess of the greatest fortunes of the day. Pasion also, at least toward the close of his active career, must have enjoyed a credit fully as great as that of Phormion, for Apollodorus, when absent from Athens on public business, found it possible readily to obtain large sums of money wherever he might be, merely because of the fact that he was Pasion's son. Pasion could command

credit, he says, in all the financial centers of the Hellenic world. From these and other passages it is clear that financial operations had reached the stage where credit was a systematic and important means of facilitating transactions. Naturally the credit enjoyed by any individual banker would depend upon his actual resources and his personal integrity; strong and long-established institutions would readily command credit anywhere, while that of less successful or newly established banks would be relatively slight.

CHAPTER VI

THE BANKER AND THE COURTS

BANKING in Athens was of sufficient importance in the eyes of the law to call for the establishment of a distinct class of actions called "banking actions," set quite apart from the civil actions arising upon ordinary contracts, loans, and other financial transactions. The statement is generally made, but without actual evidence so far as I can discover, that a "banking action" would lie against a banker for the recovery of a deposit, and there is nothing in either of the two cases in which a banker is sued to recover a deposit to indicate that the action was not of this type. On the other hand, there are several considerations which incline me to the belief that these special "banking actions" were primarily suits instituted by bankers to recover loans made by the bank, and not—at least not exclusively—for the recovery from the banker of deposits.

It is noteworthy that these special banking actions lie in the court of certain magistrates called "Introducers," who are intrusted with a very special jurisdiction. The suits they handle are all of the type known as "thirty-day actions," in which judgment had to be given within thirty days of the filing of the complaint. Other actions which lie in this special court are civil suits for assault and battery, suits having to do with mutual loan associations and corporations, suits for the recovery of

slaves and live stock, suits arising from disputes among trierarchs (wealthy citizens who maintain vessels in the navy), suits to recover dower, and suits to recover loans on which interest has been charged not in excess of the legal rate of 12 per cent per annum, or loans which are to be used as capital for business undertakings.

The reasons for requiring speedy trial of some of these actions are obvious. Disputes between trierarchs in time of war had to be settled promptly if the naval forces were to be effective. Actions for the recovery of slaves and live stock could not be allowed to drag along until the objects of litigation had deteriorated or perhaps died through neglect of the party in possession. Apparently it was felt to be an advantage that actions for civil damage resulting from assault and battery should be tried while the injury received by the plaintiff could actually be seen and estimated by the court. Since in Athens divorce of a wife by a husband was easy and of constant occurrence, and a woman depended entirely upon her dowry for support, having no further rights in the father's estate, some means had to be devised for compelling prompt repayment of dower in the event of divorce. Aside from these actions, with their special need for prompt settlement, the actions which lay in the court of the Introducers had to do with financial transactions. They were designed to enable those who had lent money at a low rate of interest, or provided capital for a business undertaking, or contributed to a mutual loan, or taken stock in a corporation, to recover their money promptly. The obvious intent was to encourage the employment of capital, and this, as we have seen, was one

of the great problems in the economic life of the city. Clearly men would be much more ready to keep their surplus wealth at work if they were free from the danger of long-drawn-out litigation in the event of a dispute or dishonesty on the part of a debtor. We have already seen that banks supplied a considerable proportion of the total capital available to the business world. It must have been very important to afford the banker every possible element of security, and thus to encourage him to keep his money invested. We can have little hesitation in concluding that these special banking actions were primarily for the recovery of loans made by banks, and the principal function of this special court was to protect and encourage the employment of capital.

CHAPTER VII

THE BANKER'S CHARACTER AND STANDING

IT is needless to reaffirm what is clear from the facts presented, that bankers were leaders in the business and financial world and that the successful banker occupied a position of great prestige and personal distinction. It is likewise clear that successful bankers must have been in most instances men of high standards and strict integrity. On the other hand, we find in the ancient record very serious allegations against the three most prominent bankers of whom we know, Pasion, Phormion, and Hermias. These may best be dealt with specifically in brief sketches of their careers, with which this chapter will end. It will suffice here to point out again that too much credence cannot be attached to charges and allegations made in the course of litigation by opposing litigants and their counsel.

Perhaps the most striking fact about the great bankers of Hellas is that in almost every instance they were self-made men, who started at the bottom of the ladder —and the bottom of the ladder in those days was much farther down than it is now. Many of the most successful bankers began their careers as slaves.

The policy of trying to keep a great banking business together and build up a family fortune by advantageous marriage alliances is familiar to all who have followed the general history of European banking. This

was a recognized practice of Greek bankers as early as the fourth and fifth centuries. Phormion, who married the widow of his former master, Pasion, by the terms of the latter's will, and also succeeded him as proprietor of the bank, cites a considerable number of similar instances. In addition to the general motives which have led men in all times and places to build up and seek to perpetuate great fortunes, the bankers of ancient Greece had a special reason for so doing. Being at the start of their careers almost without exception foreigners, and often slaves, they owed their admission to citizenship to the prestige and power resulting from their great wealth. Consequently, as Demosthenes tells us in so many words, they more than others felt the necessity of retaining, and if possible increasing, the wealth which could alone secure for them the civic franchise and social recognition in their communities.

Another analogy to a phenomenon often observed in modern times is the fact that the son of a distinguished banker often fails to duplicate his father's success, despite the desire the father must have felt to see his sons succeed him in the business. The sons appear generally to have lacked either the inclination or the aptitude for following in the father's steps, or both. Thus it was Pasion who succeeded the banker Archestratus, and not the latter's son, Antimachus, whom we find subsequently living in Athens apparently in poverty. In the same way, neither of the sons of Pasion was ever tempted to enter upon a closer connection with the bank than that of lessor. Pasicles received the bank at the partition of Pasion's estate, and we never hear of the institution

again. It is the new bank of Phormion that comes to the front. Apollodorus, who voluntarily yielded the banking business to his brother and took his father's shield factory, seems to have had little aptitude for business. When we hear of him later on he seems to derive his income principally from agriculture. He was something of a spendthrift and, though he attained some influence as a politician, appears not to have prospered in a financial way. In his case it appears that he had acquired spendthrift habits early in life as a result of his father's wealth, as sometimes happens with rich men's sons today.

There is no better way of becoming acquainted with the personality, the code of honor, and the usefulness of the ancient Greek banker than to pass in review briefly the careers of the three men to whom reference has just been made—Pasion, his successor Phormion, and Hermias, the contemporary and friend of Aristotle, the banker who became a king.

Even toward the end of the fifth century the life of the ordinary individual in the eastern Mediterranean was sometimes exposed to vicissitudes which might reduce him to slavery. How it was that so brilliant a man as Pasion came to be sold as a slave we do not know; it is, of course, possible that his parents were slaves. We do know that Pasion was singularly fortunate in being purchased, not by a cobbler or a blacksmith or a mining promoter, but by the proprietors of one of the foremost banks of Athens, Archestratus and Antisthenes.

Athens was at this time the financial center and commercial metropolis of the eastern Mediterranean, and

her influence was felt throughout the whole of the civilized world. Toward Athens every young man ambitious to rise in the financial world looked hopefully as the future scene of a great career. Pasion, it is true, came to Athens as a slave, but there were, doubtless, even in the time of his youth, instances in which the slaves of bankers had been liberated by their masters, had themselves achieved success in their profession, and had become honored citizens of the community. We have only scattered hints regarding the earlier portions of the man's career, but do know that he combined with great industry and ability a personal integrity remarkable even in a profession where integrity was a prerequisite of success. The services he rendered his masters were so considerable that he was rewarded with the gift of freedom.

When first we get anything like a picture of Pasion's life he is free, probably a citizen of Athens, and proprietor on his own account of one of the strongest Athenian banks. His fortune is now equal to those of the wealthiest Athenians; he has on one occasion donated to the state a thousand shields and five warships of the largest class. His wife, Archippe, appears to have been an Athenian woman of good social position, and his two sons, Apollodorus and Pasicles, evidently enjoyed all the advantages to which young Athenians of the wealthy class could look forward.

There can be no question that Pasion was generally regarded as a man of excellent character and strict probity. Both his spendthrift son, Apollodorus, and his former slave and successor, Phormion, whatever they may say of one another in the bitterness of a long family

feud and incessant litigation, speak of him only in terms of sincere admiration and profound respect. Hence it is something of a shock, when we turn to one of the speeches of the young orator, Isocrates, to find Pasion depicted as a scoundrel of the deepest dye. The story is a long one, but its general outline may be given; it is more like the plot of a melodramatic novel than any other episode from ancient life that I now call to mind. The plaintiff, a young man from Pontus, the son of Sopaeus, is suing Pasion to recover a very considerable sum of money which he alleges Pasion had received from him as a deposit. According to the story he tells the court, his father was a wealthy and influential citizen of Pontus, and right-hand man of its ruler, Satyrus. The young man desired to travel, and his father, like the fathers in the *Arabian Nights,* provided him with a ship, a valuable cargo of merchandise, and a very large sum of money, that he might turn an honest penny, if his talents lay in that direction, while seeing the world. Upon coming to Athens and learning that the bank of Pasion was much esteemed by merchants and importers, he deposited his ready money therein. Now comes the melodrama. The young man's father was denounced to Satyrus upon the charge of conspiring against his person and throne. He was thrown into prison in Pontus, his property was confiscated, and emissaries of the tyrant in Athens were ordered to seize the money and goods in the possession of his son. The son, in dire distress, sought Pasion's aid and counsel, and they agreed to conceal the existence of the sum deposited with Pasion's bank and thus keep it from falling into the hands of the

tyrant. To carry out this pretense more effectively, the young man took a formal oath to the effect that he was actually indebted to Pasion for loans of considerable amount, and the emissaries of Satyrus, although they secured the young man's visible possessions, failed to discover the deposit in the bank. Not long after, the young man went to Pasion to withdraw his deposit, and to his utter consternation Pasion disclaimed any knowledge of the transaction. We need not follow the story further, with its allegations of minor acts of dishonesty by which Pasion attempted to defraud the man who had trusted him in his personal honor. Nor do we know, unfortunately, what was the outcome of the litigation.

I give this story for what it is worth. It reads like romance, or a plot devised by a writer of cheap fiction; but we cannot, of course, say that it may not be true or have some element of truth behind it. If we do believe it, however, we must assume that in Pasion we have an instance from real life of Dr. Jekyll and Mr. Hyde, for there can be no doubt that Pasion in later years enjoyed the respect and esteem of the great majority of his fellow-citizens, and was regarded as combining in a remarkable degree business ability and high personal integrity. In his old age Pasion's health gave way, no doubt as a result of long and strenuous activity. More and more he left the actual conduct of the bank to its cashier, Phormion, his slave and later his freedman. Finally, toward the end of his life, he withdrew entirely from the business to enjoy the great fortune he had accumulated, and the bank, together with another business

enterprise of Pasion's, was let for an annual rental to Phormion, whose career we shall next trace briefly.

It is unnecessary to recount in detail the life of Phormion, particularly the earlier portion, since many of the facts have found a place in the story of Pasion. Phormion, like his master, was first a slave, later a freedman, and cashier of a bank; at the time of Pasion's death he was lessee, not only of the bank, but of a shield factory large enough to bring in a very considerable annual income, probably quite as important from the point of view of the profits as was the bank. At this time Phormion had not yet acquired the right of citizenship, or even the right, occasionally granted to prominent resident aliens, of owning real property within the limits of Attica. We may therefore conclude that in this stage of his career, although he had proved himself an able business man, he was not yet distinguished from the great mass of prosperous alien merchants and financiers who resided in Athens. There can be no question, however, as to the very great success that came his way in the years to follow; at the time of the famous lawsuit with Apollodorus, to which we owe Demosthenes' speech in behalf of Phormion, he was one of the wealthiest of Athenian financiers, enjoying a great reputation, commanding almost unlimited credit, and possessing the rights of Athenian citizenship.

To go back to the time of Pasion's death, we find that the old banker felt such great confidence in his former slave that by the terms of the will he constituted him one of the guardians of his minor son, Pasicles, and a trustee of the estate. More than that, he inserted in

the will a provision leaving to Phormion his own wife, Archippe, the mother of Apollodorus and Pasicles, with an exceptionally liberal dowry. Phormion and Archippe lived together for a number of years, and several children were born of the marriage, but Archippe died apparently not long before the time of the suit just referred to.

Apparently Archippe was able, during her lifetime, to prevent her extravagant and somewhat overbearing son, Apollodorus, from coming to an open clash with Phormion, despite an instinctive dislike for his father's former slave that was aggravated by a series of petty disputes over family property and especially by Phormion's marriage with his mother. It is from the two speeches delivered by Apollodorus in connection with his suit that we get a very unfavorable estimate of Phormion to set against the distinctly attractive picture we have drawn. However, a careful study of the speeches in which Apollodorus attacks Phormion, together with some sidelights on his character gleaned from other sources, seems to afford good reason for looking upon the allegations which have to do with Phormion's integrity and personal character as baseless slanders, in part a manifestation of personal hatred, in part deliberately intended to influence a court of justice. That this conclusion is a fair one and not due solely to prejudice in favor of Phormion would appear from a circumstance of which we are told by Apollodorus himself. When the suit against Phormion was brought to trial the members of the court were so impressed by Phormion's arguments that they actually refused to hear a single word from the

plaintiff and hooted him from the speaker's stand. Such a proceeding is not greatly to the credit of the court, but is a valuable testimonial to the popular estimate of Phormion's character.

Although we should like to know more of this interesting man's career, there is no information touching his life or activities subsequent to his trial. We may therefore voyage from Athens to the city of Assos in Ionia to see what may be learned about Hermias, the prince of Greek bankers.

About the time that Pasion was prominent in the financial world of Athens there lived in the town of Assos in Ionia an influential banker named Eubulus. Eubulus, who was apparently engaged in financial operations on a large scale, seems to have lent money to a Persian official in that region and to have taken as security for the loan an assignment of the revenues of Assos and a neighboring town, Atarneus. As these towns had been under the supremacy of Persia, this amounted to an assignment of political power, and the banker became, for all practical purposes, the ruler of the two cities.

An interesting story is told of Eubulus to the effect that upon one occasion a Persian governor of Lydia threatened to lay siege to Atarneus. Eubulus asked him how long he calculated it would take him to capture the town and what value he would put upon his time in actual money. He then offered to surrender the town peaceably and at once for a somewhat smaller sum. Such an application of business methods to warfare seems quite as remarkable as anything that Lloyds has undertaken.

Eubulus had among his slaves a young man named Hermias, who was his confidential secretary. So impressed was he with Hermias' ability that he determined not to restrict his education to the purely practical business training he would get in the bank, and sent him to Athens, then the greatest center of liberal study and training in the world. Here Hermias remained for several years, studying philosophy, probably under Plato, and certainly with Aristotle. During this time he formed a friendship with Aristotle which endured throughout his whole subsequent life. It is to this friendship that we owe chiefly what information we have regarding his career.

At the conclusion of his study in Athens, Hermias returned to Assos and became a partner with his master, Eubulus. On the latter's death he became the proprietor of the banking house and ruler of Atarneus, if not of Assos. That Hermias, together with certain associates, constituted the government at Atarneus cannot be questioned, for we have an inscription in the British Museum preserving the text of a treaty of alliance between the city of Erythrae and "Hermias and his companions," representing the government of Atarneus. Dr. Leaf thinks that the "companions" of Hermias were not merely men associated with him in the government of the town, but his banking partners, whom he had taken into the business after the death of Eubulus. He further suggests that the expression "Hermias and his companions" means exactly "Messrs. Hermias & Company." The bank controlled by this firm, Dr. Leaf thinks, "took

over all the administration of the town, including the maintenance of an army, and collected the taxes. It is likely that for the small towns of Greece such an administration of the public funds may, from a purely economical point of view, have been most conducive to prosperity, if the administrators were men of wide views and public spirit. And Atarneus was a very small place indeed, and quite unable to stand alone."

Hermias did not lose his interest in liberal study when he returned from Athens to Assos and exchanged for the spiritual pursuits of the Lyceum the activities of a banker. In a neighboring town were two philosophers who were friends of Plato, and among the letters attributed to Plato is one addressed jointly to Hermias and these two philosophers, urging them to remain close friends and take advantage of the opportunity for intimate association afforded by their close proximity. A still stronger testimony to the persistence of Hermias' interest in philosophy and the friendships he had formed in Athens is the invitation he extended to Aristotle and Xenocrates after the death of Plato to come and live with him at Assos. They accepted, and for three years lived in Assos in close association with Hermias, with the result that during that time the city was "the Mecca of Greek philosophy." The friendship between Hermias and Aristotle was cemented still more closely by the marriage of Aristotle with Pythias, a relative, perhaps a niece, of Hermias.

Hermias' devotion to philosophy, his local business enterprises, and his responsibilities as "king" of Atar-

neus did not, however, take up his whole time or energy. He became interested in *Weltpolitik*, as we have just recently learned from a newly discovered papyrus manuscript, and was closely associated with Philip of Macedon in his plans to attack and conquer Persia. Philip must have been intensely feared by the supporters of the Persian king, and Hermias, as one of his close confidants and advisers, fell a victim to this fear and hatred. He was invited to a conference under an assurance of safe conduct, but was treacherously imprisoned and later put to death after cruel tortures by the Persian king. His towns of Atarneus and Assos were taken by the Persians, and Aristotle, with his wife and Xenocrates, was compelled to seek refuge in Lesbos.

As in the case of Pasion and Phormion, we find conflicting estimates of Hermias' character, but his career is on a grander scale than theirs, and the enmities of which he is the object seem to be connected primarily with his public and diplomatic activities. The historian Theopompus is the one who attacks him most bitterly. His hatred of Hermias is perhaps to be attributed to the fact that Atarneus had once belonged to Chios, the native state of Theopompus, and the Chians must have felt very bitter at seeing the town subjected to a former slave of non-Hellenic birth. Even Theopompus, however, has something good to say of Hermias, whom he terms "artistic and literary." Against the testimony of Theopompus we may put that of Aristotle, who was the friend and admirer of Hermias in his lifetime, who dedicated a statue at Delphi to his memory, and composed

in his honor a poem so filled with praise that it was criticized for commending a mortal man in terms more appropriate to a god. As Dr. Leaf says, Aristotle was not likely to be swayed by sentimental partiality. He had the highest moral standard of his day and knew Hermias intimately. We can have little hesitation in accepting his judgment and regarding Hermias as a man whose private character and ideals of conduct adorned the high position to which he finally attained.

CHAPTER VIII

GREEK BANKING IN HELLENISTIC AND ROMAN TIMES

WITH the graphic picture of Athenian banks and bankers given by Demosthenes the history of banking in Greece proper comes practically to a close. Henceforth our sources are limited to a comparatively small number of inscriptions widely separated in time and place, and the best we can do is to glean a bit of information here and there. What is perhaps most to be regretted is that we lose the close touch with personalities which has lent our subject much of its interest. If we would pursue further the history of Greek banking we must turn from Athens to Egypt. We can spend no more time lounging in the shade of the Parthenon, but must be rummaging in the rubbish heaps of Arsinoe and Hermopolis.

This is not the place to repeat the fascinating story of recent discoveries of papyrus material which have made it possible, within the last forty or fifty years, to reconstruct with some accuracy and not a little detail the public and private life of Egypt during the Hellenistic age and the earlier centuries of the Roman era. Documents have been recovered and published literally by thousands, and many of them have to do with banking transactions. In fact, we have far more specific and complete information on the technical details of banking than could be extracted from the speeches of Demos-

thenes, but the formal instruments with which we have to do—drafts, receipts, letters of credit, vouchers, etc.—seldom reflect much of the personalities behind them. Although the picture that can be drawn has more detail than that of the classic period, it is in a way far less interesting.

This does not mean, however, that the story of Greek banking under the Ptolemies and the Caesars is lacking in interest or importance. It well deserves a careful and exhaustive treatment in any history of finance, but it does not properly fall within the scope of the present study. Yet I cannot dismiss it without attempting to give some idea of its more significant phases. There is first the rise of the state bank and the government monopoly, culminating in the pernicious policy of greedy exploitation and tyrannical control of industry and finance which the Ptolemies borrowed from the pharaohs and handed on to the emperors of Rome. There is the quaint and curious system of grain finance developed in the royal granaries and probably without a parallel in human history. Here we see grain used as money, deposited, checked against, transferred on paper from one account to another, or even from city to city—in fact, every transaction that can be carried on with money duplicated in grain.

As regards the general history of Greek banking in Egypt, it appears to have been a government monopoly under the Ptolemies. Royal patents conferring the exclusive right to conduct a bank within a certain district would be sold to the highest bidder. As a result, private banking appears not to have flourished greatly until Egypt became a Roman province, when the restrictions

apparently were removed and a free field offered to the enterprise of private individuals. In fact, the coming of the Romans seems to have brought a genuine revolution in banking and finance, and private banks sprang up like mushrooms in every town of importance. This may be illustrated by what has recently been discovered in regard to the banks which existed in the town of Arsinoe during a period of something more than seventy years, beginning toward the end of the first century, A.D. Within this comparatively short time nearly twenty individual banks are mentioned in the sources. Not infrequently the names of the owners or managers are known. Two of them appear as active heads of their institutions over about eighteen years, which would be a fairly long career for a bank president nowadays. A number of these banks are known to have existed through several decades, and one of them appears and reappears in the documents during a period of nearly seventy years. In the year 147 A.D. Arsinoe boasted no fewer than seven separate and distinct banks, and if only we had been so fortunate as to have recovered from the rubbish heaps some of the publicity material put out by the Arsinoe Chamber of Commerce we should doubtless find these seven banks spoken of with pardonable pride as evidence that "business was never better." During several years within the period four or five banks are attested. This is the more impressive when it is recalled that we have not a complete record or anything resembling it, but only a heterogeneous collection of scraps of paper and pottery which chance, aided by a dry atmosphere, preserved in the dump heaps of the city for nearly two thousand years.

PART IV

MINES AND MINING

CHAPTER I

INTRODUCTION

ONE day, in the year 483 before Christ, an obscure inhabitant of Attica, standing in the rugged hills about Laurium, held in his hand a tiny bit of rock. His action in the next moment was to influence the whole course of human history, from that day to its end, though he was to live and die undistinguished from the mass about him. He may have been a beggar or a slave, yet no conquering monarch was ever so truly as he the instrument of destiny. It was a moment in which the future fortune of all humanity trembled in the balance; in comparison Caesar's crisis at the Rubicon was trivial and petty, for then only the fate of an empire was at stake.

In some such fashion we may imagine the discovery of those rich masses of silver-lead ore from which wealth flowed into the coffers of Athens in time for her to build the fleet with which she won at Salamis and threw back the tide of Persian invasion upon Asia. Parodoxical as the assertion may appear, the striking of this deposit at this particular time is perhaps the most momentous event, apart from the discovery of fire, in the history of the human race. Had it not come when it did, Athens would have had no fleet, and could have won no victory; there would have been no Athenian Empire and no Age of Pericles. It is vain to speculate on what might have happened had things been otherwise, yet we cannot

avoid a feeling that this unknown Athenian held in his hand that day what has become our most precious legacy—and might have tossed it carelessly aside. We cannot say what manner of culture Europe would have evolved under oriental sway, with no flickering fire of Greek genius to blaze into a Renaissance, no Roman Empire, very possibly no Christian church, but we may be sure it would have lacked much of the spiritual and the material riches on which we pride ourselves. Leaving rhetoric and fanciful imaginings aside, we may say in all soberness that the historian is blind who sees in the silver strike at Laurium no more than a trivial incident in the economic life of Athens, and in the story of the silver mines only a mass of wearisome detail to be left for the grubbing specialist.

When we read of the days of '49 and the stirring scenes of the great "gold rush" to California we do not reflect—most of us—that the '49ers were but re-enacting scenes which had often taken place before and will continue to take place until every portion of the earth has yielded its tribute of precious metals and precious stones. The "rush" that followed close upon the strike at Laurium was of course on a far smaller scale than that of '49. The number of those who could participate was small. The few miles they traversed from the city to their claims was an infinitesimal distance as compared with the long journey from the East to the Pacific Coast. The Athenian prospectors were not penetrating into new and savage regions, nor were any particular hardships to be expected on the journey. Finally, it was not a gold rush, but a "silver rush." But the psychology of

the moment must have been very much the same, and the economic effects were not dissimilar.

It had been known for centuries that there were deposits of silver and lead in the extreme eastern portion of Attica. Prior to the fifth century, however, these had not been extensively worked. Men had scratched the surface of the earth here and there and found ores from which they extracted by primitive methods small quantities of silver and of lead, but in all probability there had been no operations that can justly be termed a development. The Athenians of these early times were not so desperately in need of wealth as we moderns, and they still regarded agriculture as the best means of procuring it, with trade perhaps occupying second place. Freemen, and particularly citizens, would not readily undertake the grueling labor underground required for any true development of a mining industry. Probably the region had not been so thoroughly prospected as to reveal the real extent of the deposits or the character of the richer lodes. Furthermore, the slave labor available in Attica in those earlier times was apparently sufficient only for the agricultural and industrial activities of the population.

Suddenly all this was changed. Near the village of Maronea a new and exceedingly rich body of ore was discovered—just how we do not know, perhaps in the fashion imagined in our opening paragraph, perhaps more prosaically by some workman toiling in a shaft or gallery. Whatever may have been the manner of the discovery, the effects were startling: the populace poured forth in eager throngs to the silver fields; every resident

of Athens of an energetic or ambitious temperament was eager to participate in the quest for wealth. Those who had or could borrow sufficient capital secured concessions from the state, bought or hired slaves and the simple mining apparatus of the times, and opened mines. How tremendous was the rush we may infer from Aristotle's explicit statement that by the end of the year the government had received from the mines, over and above the profits made by individuals, the then enormous sum of one hundred talents.

The first great period of Athenian silver mining ended with the Peloponnesian War. In the later years of the war the Spartan invasions of Attica interrupted operations, and after the final defeat of Athens and her loss of political and commercial supremacy the industry languished in common with others. In the times of which Xenophon writes the revenues that came to the state from the mines were not nearly so large as they had been in the fifth century. It is likely, however, that the latter part of the fourth century saw a resumption of activities. This was probably begun under the political leadership of Eubulus and continued by Lycurgus, both men who made their mark as skilful financiers rather than great statesmen. In the fifth century some of the greatest fortunes in Athens had been founded or largely augmented by investments in silver mines or by letting out slave labor to mining operators. During the renaissance of mining in the next century we hear of *nouveaux riches* who have made prodigious fortunes in silver, in some instances apparently by questionable transactions and by frauds perpetrated upon the state treasury. One

mining company, whose members seem to have been "malefactors of great wealth," is reported to have made in three years a profit of no less a sum than three hundred talents, of which the equivalent today would run well into the multimillions. It is too bad that we have only these sketchy outlines and not the real inside story with all its horrible details. In that case Laurium might achieve a fame equal to the Comstock.

The site of these ancient workings is a region of irregular hills, in most places bleak and desolate, but in others partly covered with straggling trees. In remote times these hills no doubt compared very favorably with other highlands of Attica in the matter of forestation, and their present barren state is chiefly the result of the ancient industrial operations we are to study. It is comparatively easy to trace here and there the outcroppings of the various formations in which the precious ores are found. Those with which the ancient miners had to do are five in number, three of limestone separated by two of schist. The deposits, in the form of silver-lead ore, are found mainly at contacts between these formations and are more abundant where the schist lies upon the limestone.

The traveler who visits Laurium today can still see quite distinctly the marks of the ancient operations. Hundreds of ancient shafts are visible. Some of them penetrate to a very considerable depth, with regular walls, broken only by the shelves on which the workmen rested their ladders. At intervals stations were made from which levels were run, following the streaks of ore through the rock, where the slaves of ancient mining

promoters worked by artificial light many feet below the surface of the earth.

Unfortunately no ancient writer has left us any details in regard to the exploitation of these deposits. But modern engineers and archaeologists have examined the shafts and levels with minutest care; they have recovered remains of apparatus, and have analyzed the content of slag heaps. As a result of their painstaking researches we can describe with a fair amount of detail and some assurance of accuracy the methods employed by the operators of the fifth and fourth centuries in extracting, crushing, concentrating, and smelting the silver-lead ore, and finally in separating from the lead the silver that was the principal object of their activities. Furthermore, we have among the speeches attributed to Demosthenes an argument delivered in the trial of a mining suit in the fourth century. From this and from an interesting treatise on the public revenues of Athens attributed to Xenophon, we can reconstruct in some measure the history of these ancient operations. We can get an idea of the output of the mines and, what is far more interesting, can learn something regarding the personalities of the men who financed and conducted mining operations, of their rights and obligations, and the ancient Attic law of mines.

CHAPTER II

APPARATUS AND WORKINGS

WHEN compared with modern mining operations, in which ore is extracted and handled in great quantities by complicated and powerful machinery, the methods of the ancient Athenian engineers must seem very primitive indeed. Their apparatus was extremely simple. There were no hoisting engines, or cars, or any comparable equipment. The mining operations were performed with four very simple tools: a chisel such as might be used by a stonecutter today, a heavy hammer with which to strike the chisel, a pick, and an instrument for handling the broken ore and rock that is best described as something like a shovel. The metal parts of these tools have been found in quantities. Although they are much corroded by rust, analysis shows that they were for the most part of a good quality of iron, hand-forged, and, in the case of the chisels and picks, carefully tempered. We have a silent but trustworthy witness to their original keenness in the clean-cut markings they have left upon the rocks. The miners also had lamps, and sacks in which to transport the rock and ores to the surface. The lamps were usually made of pottery, but sometimes of lead, and were placed in niches at regular intervals in the walls of the tunnels. It has been estimated that they would burn without refilling for ten hours, which was perhaps the length of the shifts.

The workings laboriously excavated with these simple tools are extremely interesting. There are shafts, usually vertical, but sometimes inclined, and also levels or galleries, which follow the windings of the different ore bodies. Galleries which were constructed primarily as a means of exploring the ground, and do not touch the actual deposits of ore, are easily distinguished from the stopes and chambers in which ore has been mined.

Perhaps the most striking thing about the galleries is their extremely small size. They are seldom more than three feet in height, oftentimes not so much, and usually only about two feet in width. It is hard to realize that human beings could work in these tiny burrows, still less that rock and ore could be transported along them; and we can easily credit the statement of Theophrastus that in the mines of Samos the miners found it impossible to stand at their work, and were compelled to lie on their sides or even on their backs. It has been pointed out that these small galleries, despite their inconvenience, possessed some distinct advantages. Timbering was unnecessary, and such wide, roomy drifts as are found in modern mines could not have been dug without explosives except at a tremendous expenditure of time and labor. Where the levels do not touch upon the ore deposits they are of very regular shape—rectangular, trapezoidal, or sometimes arched at the top; walls are hewn remarkably smooth, and dimensions are uniform throughout. On the other hand, the stopes and chambers in which ore has been mined are of all shapes and sizes, representing the form and extent of the deposits. In general they follow along the contacts be-

tween the formations, where the rock was easiest to excavate and ore most likely to be found.

The shafts were not greatly larger than the levels in cross-section, averaging something like 6 by 4 feet. They were uniformly rectangular, and driven with such precision that, when tested by the plumb line, they seldom deviate appreciably from the perpendicular. In most shafts shelves of rock were left at regular intervals as supports for the series of ladders which led from top to bottom. In others the arrangement of the shelves shows that there must have been a sort of circular staircase winding up along the sides. This was facilitated by turning the shaft slightly upon its axis at intervals of a few feet. The depth of these shafts is surprising. Some of them are sunk over three hundred feet through barren rock, and few, in localities where the deposits lay considerably beneath the surface, are less than two hundred feet in depth. They possess a very real beauty of design and execution, most unusual in a work of this purely practical character, and are regarded by engineers and archaeologists as the finest mining shafts of antiquity. Their perfection is the more astonishing since they were the creation, not of the state, but of private individuals. Each lessee paid the expense of sinking out of his own purse, and knew that some day, when the deposits should be exhausted, the shaft would become useless. Nevertheless the Athenians never ceased, during the whole exploitation of this region, to construct their shafts with the same care and the same design.

When adits had been carried so far underground that ventilation was bad and the work of transporting

the rock and ore through the long narrow passages proved slow and cumbersome, other shafts would be sunk to meet the galleries near the points to which they had been carried.

The methods employed to secure adequate ventilation in these narrow, tortuous workings are quite interesting. Naturally the problem was more troublesome in the earlier stages of working the lower deposits, when a single deep shaft had to provide fresh air. Sometimes the difficulty was solved by sinking two shafts close together, and connecting them underground; a draft was induced by an extension chimney, or perhaps by heating the air in one of the shafts. More often, apparently, the shaft was divided by a wooden partition, carefully caulked with clay, and a natural draft induced by a chimney. As the workings progressed, however, the problem became simpler. Since the levels followed formations very considerably inclined from the horizontal, it was necessary only to sink shafts to meet them at various elevations, and natural causes produced a continuous draft of pure air through the mine. The circulation was made more effective by frequent transverse passages, and could be regulated and directed by closing up galleries which were not in use. At best the ventilation could scarcely have been good, and the workmen must have suffered much from heat and impure air.

Modern engineers have been able to distinguish three distinct types of technique, representing three periods in the operations. In the first the works seem to have been constructed at random, starting with rude adits at some point where ore was discovered on or near

the surface and following the ramifications of the veins wherever they might lead. In this period shafts were constructed apparently only to give ventilation and easier access to the levels as they went farther and farther underground. In the second period shafts were used for the exploration of the ground in search of ore, and not merely as adjuncts to levels previously constructed. During this period probably the lower deposits were discovered. It has been conjectured that shafts came upon them in localities where the upper formations had been eroded, and the discovery that this was a second and lower series of deposits was made when the levels failed to connect with those of earlier workings which were following the upper deposit. However this may be, there is abundant evidence that in the third period the operators consistently practiced a methodic and scientific attack upon both contacts. Their acumen in picking out advantageous points from which to explore, and the precision and efficiency of their engineering operations are remarkable.

These general statements may be illustrated by considering briefly the general plan of development followed in one of the concessions containing extensive workings near Demoliaki. The engineer in charge, whoever he may have been, began by sinking four shafts at the angles of an irregular quadrilateral, in order to determine the general arrangement of the strata in which ore deposits might be looked for. When these four shafts had reached the contact to be explored he began to drive levels from the two downhill shafts, following the contact in the general direction of the two uphill shafts.

These levels kept approximately parallel to one another and were connected by transverse drifts, sufficiently close together to insure adequate exploration. When something like half the distance had been covered, a large deposit of ore was reached. At this stage, apparently, levels were started from the uphill shafts and carried forward until a junction was effected at the spot where the deposits were most extensive.

The apparatus for dressing and smelting the ore was located in the immediate vicinity of the large deposits, and five shafts, somewhat less in diameter than the original four shafts of exploration, were sunk, partly for the purpose of ventilation, but chiefly to facilitate the transportation of ore. The work of removing the ore then proceeded by methods we shall presently study. The principal difference between this plan and that of a modern mine, aside from the small size of the shafts and levels, lies in the fact that the latter are not exactly horizontal and are not driven on straight lines, as in modern mines, but follow the contacts and general inclination of the strata, going where the rock is easiest to work and the chance of striking ore seems best. This difference is probably to be attributed to the fact that ore was carried by porters and not in cars.

CHAPTER III

EXTRACTION AND DRESSING OF THE ORE

AS may be inferred from our account of the miners' tools, the ore was mined with pick, chisel, and hammer. Small deposits were simply removed and transported to the surface as the galleries progressed. Large deposits were systematically explored until their extent and direction were ascertained, and drifts were then run to the most advantageous points of attack. A favorite method of removing large deposits was to excavate the lower portion and build up the floor of the resulting chamber with broken rock taken from other parts of the mine, a method not dissimilar from that in use today.

Where large deposits were removed, the problem, so acute in modern mining, of adequate support for the roofs of the chambers had to be met. This was effected sometimes by leaving pillars of ore, of which the size and spacing were nicely calculated according to the pressure they must withstand, sometimes by constructing piers of stone, and occasionally by timbering. The engineering ability of the ancient experts is abundantly proved by the durability of their works. During about 1,800 years the mines have been completely abandoned and have stood practically without caving, although during this long lapse of time the locality has been visited by a number of earthquakes of varying intensity.

After the ore had been removed from the mine and

brought conveniently near the reduction plant it was carefully hand-sorted. Fragments of too low grade to pay under existing conditions were discarded; some of these rejects it has been found profitable to rework by modern methods. The whole region is covered with heaps of this rejected ore, of which the total volume has been estimated in modern times at something like 14,000,000 tons. Examination of these heaps shows that the ancient ore sorters were remarkably efficient in selecting the material which could be used. Twelve per cent was apparently the required standard, and none of the rejected ore is above this figure, while the average is something like 8 to 10 per cent. Ore left in the mines in the form of supporting pillars scarcely ever runs above 12 per cent, since the Athenian miners very adroitly managed to leave the supports at points where the mineral was least rich. As they were unable to utilize the poorer grades, this involved no waste.

After the ore had been sorted, all fragments which contained mineral in its pure state were sent directly to the furnaces. The remainder went to the crushing plant, where it was subjected to a rather elaborate process of preparation for smelting, similar in essentials to the processes employed today, though not so well adapted to low-grade ores. The pieces, which were of comparatively small size at the start by reason of their having been mined by hand, were first crushed in huge mortars. These mortars, in which a heavy iron pestle was worked by hand power, were made of hard trachyte. In principle the apparatus was similar to the gravity stamp used for crushing ore in modern mines.

After the preliminary crushing the ore went to the mills, which were not unlike those used for grinding cereals, but fitted with stones of an extremely hard trachyte. The upper stone was revolved upon the lower by means of long beams fitted in grooves. It has been estimated that a typical mill of this type could crush about four tons of ore in twenty-four hours. In some of the plants, apparently, the mills were adjustable, and could be set to handle ore at different sizes; in others, the ore seems to have been passed first through one mill and then through another until it was sufficiently fine.

The pulverized ore was next "sized" by screening. Materials which passed through the screen were sent at once to the ore washer, an apparatus resembling the classifiers now used in dressing certain kinds of ore, but not corresponding precisely to any modern apparatus. Oversized particles were probably in most cases subjected to further milling, though the presence of washers intended for material of different sizes would indicate that this was not an unvarying practice.

These ore washers, with their cisterns and conduits, are perhaps the most ingenious and effective apparatus the ancient miners devised. It must be remembered that the operators of the mines at Laurium did not have the abundant supply of water for sluicing that is generally available at our modern mines. The only water to be found in this comparatively low range of hills came from the rainfall of the winter months. It had to be conserved with extreme care and used over and over again if the mines were to be operated throughout the long dry season of summer.

Huge cisterns were constructed in the most advantageous spots throughout the hills. Occasionally these were hewn in the rock, but more frequently they were constructed of masonry and the interiors carefully coated with cement to prevent leakage. In instances in which the extant remains of cisterns have been examined, it is found that the size is nicely calculated to the area of the watershed which drains into the reservoir. The best-preserved examples range in cubic capacity from about 170 to more than 750 cubic yards. To every reservoir was attached a small settling basin, and in most instances the reservoir was roofed over in order to minimize the loss of water from evaporation. In some cases, where the contour of a ravine made it practicable, a simple dam was substituted for this more elaborate structure.

From these reservoirs the water was led by conduits to the ore washers. These were rectangular tables of stone, occasionally hewn in the solid rock, but more frequently constructed of carefully joined masonry, heavily faced with mortar and finished off with a thin coat of hard cement. This last coat was tooled with surprising accuracy to present an absolutely smooth surface with exactly the proper inclination. The tables were of various sizes and of different designs, though the fundamental principle was the same for all. Variations were probably due in large part to the fact that material of different sizes was to be handled. Consequently ore washers were frequently grouped together, each group comprising the plant attached to one of the concessions. The

plant most generally used, to judge from the remains, consisted of a cistern and two washers.

At the upper end of the platform was a reservoir from which water was discharged upon the ore. It extended almost entirely across the platform and was pierced at regular intervals with holes from which jets of water issued. Just beside and below this was an inclined plane upon which the pulverized ore was placed; below this plane, parallel to the reservoir, was a grooved channel for carrying off the water and the lighter particles it bore in suspension. This channel turned at right angles into a second, and that into a third and fourth, so that the four channels formed a rectangular parallelogram. The area they bounded was occupied by a second inclined plane, considerably larger than the first, upon which the concentrates were thrown for draining. At intervals transverse grooves or ridges in the channels checked the current and caused particles of ore still in suspension to be deposited. In the angles formed by the channels were basins intended to produce the same results. The water, which was discharged in jets upon the ore, was thus carried around the sides of the rectangle at a rate of speed that became slower with each obstruction. In its course it deposited first the particles of ore that escaped from the washing platform, and later on, the foreign substances and lighter silt. From the last basin, just at the side of the reservoir, where it arrived practically clear, it was dipped out by hand and poured upon a small sloping platform from which it ran back into the reservoir; it was then ready to be utilized again for the washing of another lot of ore.

This apparatus seems to have been both effective and practical, when considered with reference to the rest of the reduction plant. It probably required the services of no more than two slaves to handle the water and the ore and to remove useless sediment from the channels and basins. If greater speed were desired, more workmen could be used, and ore washers of more than average size probably called for a larger crew. What is most striking about the apparatus, aside from the minute accuracy with which the planes and channels are given the exact inclination required to produce the desired effect, is the extreme attention given to the conservation of the water supply. As we have seen, the water was used over and over again without passing out of the apparatus. Since the wet ore was drained in the apparatus, comparatively little water was lost. Evaporation was reduced to a minimum by surrounding the table with a substantial wall and covering it with a roof. It would be difficult to imagine a simpler apparatus or one better adapted for dressing the grades of ore handled by the ancient mine operators with less expenditure of labor and more careful conservation of the precious water supply.

CHAPTER IV

ORE REDUCTION AND SEPARATION OF SILVER

UNFORTUNATELY we are not in a position to describe the reduction processes employed at Laurium as precisely and circumstantially as the dressing of the ore. It has been possible to examine numerous well-preserved specimens of ore-dressing apparatus, but there are at present practically no remains of the smelting furnaces save for a few fragments. Thus we are forced to reconstruct both apparatus and processes as best we can with the aid of slight bits of information gleaned here and there in the pages of ancient writers. Some fifty or sixty years ago, however, a number of ancient furnaces were still to be seen in a fair state of preservation. They are described as circular in form, averaging little more than one yard in diameter, and of no great height, constructed of blocks of trachyte brought from the island of Melos, or of the local schist, which was used either in blocks or made into bricks. Each furnace was equipped with a blowing apparatus, and a piece of an ancient tuyère has actually been found in one of the heaps of slag. Near the bottom of the furnace were holes through which the molten metal could be drawn.

The furnace was charged with ore and fuel, probably disposed in alternate layers. The ore charge consisted in part of the bits of pure galena selected at the

first picking and in part of the concentrates from the drying tables. The fuel employed was wood or charcoal, and analysis of the slag has shown that the temperature of the furnaces was not high as compared with the temperatures in similar processes today. It is estimated that a single furnace could reduce three or four tons of concentrate within twenty-four hours.

The metallurgists of Laurium were fortunate in having a number of excellent "fluxes" at hand in the deposits they were working—fluorite, limestone, and various forms of iron. Much of the slag found in this region shows a relatively high content of metal, from which it would appear that the operators thought it more worth their while to work rapidly than to extract all of the metal that the ore contained. In a later period, when the deposits had been partly exhausted, more effective methods were employed in reduction, and much of the slag left from earlier operations was passed again through the furnaces. Modern metallurgists have found it profitable to rework the ancient slag for the extraction of the various minerals it contains. However, slag from other ancient mining localities generally shows a much higher lead content than that from Laurium.

The silver, which, it must be remembered, was the primary object of the operations, was separated from the lead by a process still employed for this purpose—cupellation. The product of the reduction furnace, containing both lead and silver, was heated on cupels of some porous material, probably marl, and exposed at the proper temperature to the action of air, with the

result that the lead was converted into litharge and thus separated from the silver. That this was the process ordinarily employed is established beyond doubt by the quantities of litharge found in the slag heaps, and by the discovery of a small cupel which evidently had been used in assaying. It has been suggested that the cupels were placed underneath the reduction furnaces, making it possible to extract the lead from the ore and the silver from the lead by one and the same operation. The opinion seems reasonable, as we are told by Pliny that furnaces used in the Spanish mines were of this type.

However careless the metallurgists of Laurium may have been in the first reduction of the ore, they had evidently brought the process of cupellation to the point where it was extremely effective; for analysis of the litharge reveals only the barest trace of silver. As no bits of bullion have been recovered, we cannot say what was the purity of the silver as it came from the cupel. We can be certain, however, that the Athenian metallurgists were adepts in the art of refining the metal, for the silver coins of Athens from the best period have been found by test to average practically 98 per cent in purity.

It may be remarked in passing that these ancient smelters were just as much of a blot on the landscape as are our modern reduction plants. The fumes from the furnaces were hostile both to animal life and vegetation, and the immediate vicinity of the works very soon became a scene of desolation. No doubt chimneys were used at Laurium, as at other ancient reduction plants, to

aid in dissipating the smoke and gases, but even in the fifth century the locality had the reputation of being unhealthy for human habitation. Thus we see that ancient Greece was not all sacred groves and Doric temples. The contemporaries of Pericles, as well as we, had their blighted industrial districts—something we are apt to forget when we gaze upon the Acropolis or set ourselves to reconstruct the life of the ancient Hellenes from the works of their poets.

CHAPTER V

LABOR AND WORKING CONDITIONS

THE workmen employed in the mines and reduction plants were almost without exception slaves. We hear occasionally of freemen engaged in these operations, but these are probably proprietors of small concessions, who are their own managers or even take part in the physical labor as a means of increasing their modest profits.

It is unnecessary to do more than mention the different types of workmen, as their various tasks have been discussed in some detail. There were the miners who extracted the ore, porters who carried it from the mines, and ore pickers who sorted it. Then there were hands to operate the great mortars, the mills, and the ore-washing apparatus. Other groups of workmen were required for the various operations involved in the reduction of the ore and the separation of the silver. Apparently each worker was trained for the particular duty he was to perform, and the different classes were quite distinct, as in modern industrial plants. The superintendents were generally slaves, despite the fact that their duties required considerable intelligence and ability. Thus the superintendent of a mine had to be a practical engineer, and the foreman of a reduction plant, a skilful metallurgist. In one instance a slave competent to fill such a position brought the price of about twelve hundred dollars, which was in those days an enormous

sum. In addition to the workmen actually employed in these various operations, there were guards whose duty it was to watch them and see that they did not lag at their tasks.

Probably there were two shifts in each twenty-four hours, and the net working day was ten hours. The men who actually mined the rock may have worked in couples, relieving one another every two hours, since the severity of the task and the awkward position the miner had to assume would have made it almost impossible for one man to mine continuously through a ten-hour shift.

The slaves belonged for the most part to the proprietors of the concessions, but often were hired from men who made a business of supplying slave labor on contract. The usual contract was that the owner should be paid one obol per day per slave. The mining operator supplied the slave with food and such other simple necessaries of life as he might require, and was bound to return the exact number of slaves hired. The famous Athenian general, Nicias, owed a part of his wealth to the income from great numbers of slaves hired out in this way to mining operators. In general the slaves employed in the mines were inferior, except perhaps in physique, to the average run of Athenian slaves. In fact, we may guess that dishonest or refractory slaves were apt to be sent to the mines, where they toiled in chains and underwent hardships of every description. However, the Athenians were famous for the indulgence with which they treated their slaves, and it is likely that even the slaves in their mines were better off than many slaves employed in similar operations in more recent times.

Attempts have been made to estimate the size of the crews required to operate the concessions, and also the total number of slaves employed at Laurium, but the resulting figures must be regarded merely as conjectures. The average plant perhaps required a force of sixty or seventy hands for the extraction and dressing of the ore; it is more difficult to form an opinion as to the size of the crews in the reduction plants. The total number of slaves at work in the mines during the period of their greatest activity may have approximated twenty thousand. Since the number has been variously estimated at from twelve to sixty thousand, this seems a fairly conservative figure.

Whatever may have been the actual number of hands employed in the fifth century, we may be sure that an adequate labor supply was never wanting. The character of the workings and the methods of handling the ore are sufficient evidence that labor was cheap and plentiful. Although in one way this was a great advantage to the operators, from another point of view it had its drawbacks, for it militated against improvement in apparatus and technique. The mining engineers of the fifth and fourth centuries had no particular motive for attempting to devise labor-saving machinery or to introduce more efficient processes. In fact the abundant supply of slave labor throughout the ancient world is probably one of the principal causes of the tenacity with which the Greeks and Romans clung to primitive methods in the various branches of industry.

CHAPTER VI

THE PRODUCTS OF THE MINES

THE silver, which was the principal object of these ancient operations, was put to a variety of uses, chief among them the coinage of the famous Athenian silver currency. The most distinctive coins of the time bore on one side the figure of an owl, in honor of the goddess Athena, with whom this bird was particularly associated. In the slang of the day they were called "Lauriote owls," and "carrying owls to Athens" was the ancient equivalent of "carrying coals to Newcastle." Unquestionably a large proportion of the silver from the mines was required for coinage, at least in the fifth century, for Athens was then commercially, as well as politically, mistress of the eastern Mediterranean, and her currency came nearest to a standard medium of exchange for this part of the Hellenic world. The possession of an abundant supply of silver was a tremendous advantage, and no doubt had much to do with the success of her finance.

Whatever of the silver produced at Laurium was not required for coinage went to the production of various works of art and objects of use. There is abundant evidence in contemporary sources that silver plate was as essential in the proper equipment of a well-to-do home in those days as in our own, and the manufacture of silverware must certainly be put among the impor-

tant industrial enterprises upon which Athens built her financial prosperity.

From the point of view of the operators, the lead which came from the mines in such large quantities was a by-product. There was, however, a considerable demand for the metal, made greater by its abundance and cheapness, and Athens was probably the main source of supply during the times when the mines at Laurium were most energetically worked. Large quantities of lead were used in the construction of buildings, since Greek masons, instead of laying stones in plaster, fastened them by means of iron clamps and dowels, which were inserted in grooves and made firm by pouring molten lead around them. Most of the lead thus utilized remained in the ancient walls well down into the Christian era, when it was in great demand for making bullets. A good deal of the vandalism from which ancient buildings have suffered had as its object the recovery of this lead.

There were other by-products of the mines, including, probably, pigments used in the preparation of painters' colors and various chemicals employed in the composition of medicines.

CHAPTER VII

THE ATTIC LAW OF MINES

OUR knowledge of Attic mining law is unfortunately far from complete. What little can be gleaned from literary and epigraphical sources relates exclusively to the fourth century and leaves us quite uninformed in regard to many important and interesting questions. The most that can be attempted is a very general outline of the legal rules and practices governing the relations of mining operators to the state and to one another. And even this cannot be achieved without occasionally coming upon important problems that are still unsolved.

Grants of mining concessions were made by a board of officials called Poletes, who had general charge of all sales and rentals of property belonging to the state, and the first step taken by an applicant was to register a claim with this board. We are fortunate in having among the extant inscriptions one or two fragments of the records kept in this office. From these and from Aristotle's brief account we learn that there were two distinct classes of mining properties: (1) mines which had already been worked to some extent, and (2) virgin concessions on which no work had been done. The former were let for a period of only three years; the latter, for a considerably longer period, probably ten. As to the precise nature of the rights conferred upon the tenants we cannot speak with assurance. There is considerable

difference of opinion as to whether concessions could be transferred by sale or inheritance, or were limited strictly to the original grantees and not legally transferable. One thing, however, is certain: title to mineral properties was retained by the state, and the rights of grantees never embraced actual ownership.

A question that naturally suggests itself is just how and when the state had acquired its title to these grants, for the regions about Laurium, like other parts of Attica, were probably in earlier times the property of individual citizens. It has been conjectured that the surface of the ground continued to be the property of private owners, while the state claimed all mineral wealth and proceeded to grant rights of mining underneath the surface to other individuals. This view, however, involves some difficulties, and it may be that the state had acquired the legal ownership of these mineral lands in some manner not described in the extant sources.

There appears to have been a certain set time in each year at which claims might be presented to the Poletes and grants made of concessions. The concessions were of different sizes and different valuations, giving men of small means, as well as wealthy capitalists, opportunities to try their fortunes. Each concession had its official name by which it was entered on the register. The boundaries were carefully specified in the register, and marked by inscriptions carved in stone. When a gallery reached the boundary line of the concession it was not unusual to carve an inscription to that effect upon the wall. Apparently aliens, as well as citizens, might receive grants of concessions. There is some

evidence that a single individual might be awarded a number of concessions, and that joint stock companies were sometimes organized for the conduct of mining operations.

As regards the return exacted by the state for these privileges, there is again difference of opinion. Some investigators believe that a rental amounting to one twenty-fourth of the gross production was paid annually to the state; others, that a lump sum was paid at the start by way of premium; still others hold that both premium and annual rentals were paid.

The state undertook to protect its own rights by penal statutes in which certain offenses connected with the operation of the mines were forbidden and provision made for the prosecution and punishment of offenders. We hear, for example, of criminal action for failure to register a mine with the Poletes. This was directed against persons who undertook to exploit mineral lands without securing a grant from the state and paying the regular premiums or rentals. Anyone might give information in such a case, and in the event of a conviction the informant received by way of reward one-half of the fine that might be imposed. Another offense which gave rise to criminal prosecution was the cutting out of the pillars left in the chambers to support the roofs. Failure to pay the rentals at the appointed times was not an offense punishable by criminal prosecution. The delinquent operator was entered after a certain date as debtor to the state in twice the amount of the payments for which he was delinquent. Public debtors so inscribed were debarred from the exercise of civic rights until

such time as their obligations toward the state should be met in full.

The rights and duties of mining operators toward one another and toward other persons with whom they might enter into business relations were defined in a series of enactments providing for civil actions upon claims of various sorts. Among the matters that might be ground for action were (1) illegal interference with the operation of a mine, (2) the location and operation of furnaces in such a way that the smoke entered neighboring shafts and galleries and became a nuisance, (3) violent entry upon a mining concession, and (4) cutting through the boundary between concessions and removing ore that rightfully belonged to another operator. Actions brought upon any of these grounds did not lie in the ordinary civil courts, but fell within the jurisdiction of the important magistrates known as Thesmothetes, who handled criminal cases and civil cases of a special importance. Like banking suits and cases arising upon shipping contracts, they were required to be judged within thirty days from the filing of the complaints. The intent was obviously the speedy settlement of disputes that might hinder or retard the working of the mines, and it shows clearly the importance the state attached to this particular industry.

To illustrate the matter concretely, we may imagine that the creditor of a mining operator has distrained upon slaves or machinery utilized in mining operations in order to collect a debt. The mine operator whose operations are interfered with by the distraint need not

wait until the rights of the case are settled in ordinary civil proceedings, but may bring an action for damage in the court of the Thesmothetes and may expect to have judgment given within thirty days. If, however, the creditor who makes the distraint believes that this action is not justified and his debtor is availing himself improperly of his status as a mining operator to obstruct a proper and lawful execution, he may present to the court a demurrer asking that the special mining action be dismissed and the case allowed to take its ordinary course in the court of general civil jurisdiction.

CHAPTER VIII

A FAMOUS MINING CASE

(*Pantaenetus* vs. *Nicobulus*)

ONE of the most interesting ancient documents relating to the mines at Laurium is the speech of Demosthenes "Against Pantaenetus," an argument in support of a demurrer to one of the special mining actions we have just described. Although, as we have already observed, it leaves us uncertain in regard to many points of law, it gives a very good idea of what some mining operators were like and how they transacted business with one another. It must be read, however, with our usual reservation, that the arguments of litigants before a court do not introduce us to the brighter side of life, and allegations of material facts are to be taken with a grain of salt. Furthermore, we cannot be entirely certain whether the "mining plant" that figures in the various transactions includes a government concession, or is merely equipment. The difficulty is part of the general problem alluded to in the preceding chapter. Although I am inclined to believe that concessions were legally transferable and a concession was involved in the various transfers that led up to the present case, it seems best to use the ambiguous word "plant" rather than "mine."

Pantaenetus, a mining operator, had purchased from another operator named Telemachus, for the consider-

able sum of 90 minas, a mining plant and the slaves employed therein. In order to "swing" this enterprise, Pantaenetus negotiated a loan of 105 minas from men who apparently made a business of commercial loans. To secure the loan, the plant was conveyed by Telemachus, not to Pantaenetus, but to the creditors; Pantaenetus, although he was the actual operator, figured in the formal agreement as lessee.

For one reason or another, the creditors of Pantaenetus desired to terminate the loan, and Pantaenetus, in order to absolve his obligation toward them, secured a loan of 105 minas from Evergus and Nicobulus. As before, the ownership of the plant was conveyed to the creditors, and Pantaenetus became lessee at a rental equal to the ordinary interest upon commercial loans. The lease agreement contained the usual clauses designed to safeguard the parties thereto, and, in addition, the provision that Pantaenetus might secure title to the plant within a certain time by paying the amount of the loan.

Within a short time after the conclusion of this agreement Nicobulus left Athens and traveled for a considerable time abroad. During his absence Pantaenetus defaulted on one or more payments of rental, and Evergus, by virtue of the rights supposed to be conferred upon him by the lease agreement, took possession of the plant and slaves, apparently without opposition on the part of Pantaenetus. He then proceeded to operate the plant in the interest of himself and his partner. Pantaenetus, however, was not so easily got rid of. He brought a mining action against Evergus, charging that his ac-

tion was in violation of the Attic mining law and joining in his complaint a number of alleged acts regarded as invasions of his rights. The case went to trial before a popular court convened by the Thesmothetes, which found for the plaintiff and awarded him the relatively large sum of two talents by way of damages.

Upon the return of Nicobulus to Athens an interview was arranged between Pantaenetus, his two creditors, and various men who had come forward during the course of the litigation with real or fictitious claims upon Pantaenetus. Nicobulus did not like the look of things, and when Pantaenetus and his pretended creditors offered to repay the loan, provided title to the plant should be given them, he eagerly accepted the proposal. At this stage in the negotiations, however, the men who were to repay the loan declined to proceed further unless Evergus and Nicobulus would guarantee title. At first Nicobulus was reluctant, but, being very anxious to terminate his dealings with men who impressed him as of questionable honesty, he was finally persuaded to give formal guaranty of title. He took the precaution, however, of getting from Pantaenetus a final release and discharge from any and all claims, and was unpleasantly surprised and disappointed somewhat later to find himself made defendant by Pantaenetus in a mining suit. The complaint charged him with complicity in the actions of Evergus, and the grounds upon which the suit was based were apparently identical with those upon which the plaintiff had recovered damages in the earlier action. Nicobulus filed a demurrer, pleading the release given by Pantaenetus, together with technical defects in

the complaint, and taking exception to the jurisdiction. The speech written for him by Demosthenes is an argument in support of this demurrer, but, like most ancient arguments in cases of this kind, goes rather fully into the facts and general merits of the case. We have, unfortunately, no means of knowing what was the outcome, or whether Pantaenetus succeeded a second time in recovering damages for his alleged injuries; but the narrative of Nicobolus, with his portrayal of the different individuals concerned, constitutes one of our most interesting pictures of business life in the ancient world.

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